

### OWENS' COLLEGE, MANCHESTER (in connexion with the UNIVERSITY OF LONDON).

SESSION 1857-8.

The College will OPEN for the Session on MONDAY, the 17th day of October next. The Examinations, preliminary to admission, hitherto required are for the present discontinued. The Session will terminate in July, 1858.

PRINCIPAL—J. G. GREENWOOD, B.A.

The Trustees have to announce that Mr. Greenwood has been appointed Principal in the place of Mr. Scott, who has resigned that office, though the Trustees are glad to state that the College retains the advantage of his valuable aid as Professor. Courses of instruction will be given in the following departments:—

Languages and Literature of Greece and Rome—Professor J. G. GREENWOOD, B.A.  
Comparative Grammar, English Language, and Literature—Professor A. J. SCOTT, M.A.  
Logic, Mental and Moral Philosophy—Professor A. J. SCOTT.  
Mathematics and Physics—Professor A. SANDEMAN, M.A.  
History—Professor R. C. CHRISTIE, M.A.  
Jurisprudence—Professor CHRISTIE.  
Political Economy—Professor CHRISTIE.  
Chemistry—Elementary Course—Technological Course—The Application of Chemistry to the Arts and Manufactures, and Analytical and Practical Course, with Manipulation in the Laboratory—Professor EDWARD FRANKLAND, Ph.D., F.R.S., F.C.S.

N.B. In consequence of Dr. Frankland having accepted the appointment of Lecturer on Chemistry at St. Bartholomew's Hospital, the Professorship of Chemistry will shortly become vacant, and will be supplied without delay. Due notice of the appointment of a successor will be given.

Natural History—The entire Course occupies Two Sessions. The subjects for this Session are Geology and Botany—Professor W. C. WILLIAMSON, M.R.C.S.L., F.R.S.  
French Language and Literature—Mons. A. PODEVIN.  
German Language and Literature—Mr. T. THEODORES.

#### EVENING CLASSES FOR PERSONS NOT ATTENDING THE COLLEGE AS STUDENTS.

Languages and Literature of Greece and Rome (for Schoolmasters and others)—Professor GREENWOOD.  
Mathematics and Natural Philosophy (for Schoolmasters and others)—Professor SANDEMAN.  
Jurisprudence—Professor R. C. CHRISTIE.  
Natural History—Professor WILLIAMSON.

Additional Lectures on which the attendance of the Students is optional, and without fees:—

On the Greek of the New Testament, by Professor GREENWOOD.  
On the Hebrew of the Old Testament, by Professor SCOTT.  
On the Relations of Religion to the Life of the Scholar, by Professor SCOTT.

#### SCHOLARSHIPS AND PRIZES.

The following Scholarships and Prizes have been founded for competition by Students of the Owens College—viz.,  
The Victoria Scholarship, for competition in Classical Learning, annual value £20, tenable for two years.  
The Wellington Scholarship, for competition in the critical knowledge of the Greek Text of the New Testament; annual value £20, tenable for one year.

The Dalton Scholarships, viz. two scholarships in Chemistry, annual value £20 each, tenable for two years; two scholarships in Mathematics, annual value £25 each, tenable for not more than two years.

Dalton Prizes in Chemistry are also intended to be offered, the particulars of which will be published previous to the opening of the session.

The Dalton Prize in Natural History, value £15, given annually. For the better maintenance of discipline and superintendence of study out of class hours, arrangements are made according to which parents and guardians may place students during the day under the superintendence of an officer appointed to that charge. Those so entered will, for a fixed fee, have the advantage of being employed in study under his superintendence, and with his assistance when not employed in lectures; and dinner will be provided within the college walls for such as may desire it. For students not so entered, the college will, as hitherto, disclaim all direct responsibility, except during class hours.

Further particulars relating to the courses and terms of instruction and the conditions upon which the scholarships and prizes may be competed for, will be found in a prospectus which may be had from Mr. Nicholson at the College, Quay-street, Manchester, where applications may be made to the Principal on Monday, the 21st September, and thence daily up to and including the 23rd of September next, between the hours of ten and one.

JOHN P. ASTON, Solicitor and Secretary to the Trustees.  
St. James's Chambers, South King-street,  
Manchester, 21st August, 1857.

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The fee for Matriculated Students (exclusive of the laboratories) is £20, in one sum, on entrance, or two annual payments of £10. Pupils are received in the Royal College of Chemistry (the laboratory of the School), under the direction of Dr. HOFMANN, at a fee of £10 for the term of three months. The same fee is charged in the Metallurgical Laboratory, under the direction of Dr. PERCY. Tickets to separate courses of lectures are issued at £1, £1 10s., and £2 each. Officers in the Queen's or the East India Company's Services, Her Majesty's Consul, Acting Mining Agents and Managers, may obtain Tickets at half the usual charges.

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His Royal Highness the Prince of Wales has granted Two Exhibitions, and others have also been established.

For a Prospectus and Information apply at the Museum of Practical Geology, Jermyn Street, London.

TRENHAM REEKS, Registrar.

### OWENS' COLLEGE, MANCHESTER.—IN CONNEXION WITH THE UNIVERSITY OF LONDON.—TO PROFESSORS OF CHEMISTRY AND OTHERS.

The Trustees of this College are desirous of receiving proposals from gentlemen qualified and willing to undertake the office of "PROFESSOR OF CHEMISTRY," which is about to become vacant by the resignation of the present Professor, EDWARD FRANKLAND, Ph.D., F.R.S., F.C.S., who has been appointed Lecturer on Chemistry at St. Bartholomew's Hospital, London. The Trustees propose the allowance to the Professor of the yearly salary of £250, in addition to a proportion of the fee to be received from the Students attending the classes of such Professor, and which vary according to the nature and amount of the instruction required. The Professor is required to devote to the duties of the office so much of his attention as may be deemed by the Trustees necessary for the efficient instruction of the Students. It is requested that applications may be accompanied with testimonials or references, and that each gentleman applying will state his age and general qualifications.

Communications addressed "To the Trustees of the late John Owens, Esq.," under cover to Messrs. J. P. Aston and Son, Solicitors, Manchester, not later than the 5th day of September next, will be duly attended to, and further information afforded if required.

It is particularly requested that applications may not be made to the Trustees individually.  
Manchester, 14th August, 1857.

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## REVIEWS.

*Lectures on Roman Husbandry, delivered before the University of Oxford, &c.* By Charles Daubeny, M.D., F.R.S., Professor of Botany and Rural Economy. Oxford: J. H. and J. Parker.

OF the many points in which we modern English resemble the ancient Romans, there is perhaps none that is more strongly marked than our love of country life. Horace and Martial, those most inveterate of diners-out about town, rejoice in their Sabine farms; Cicero has his villa at Tusculum; Cato writes a book about farming; and Virgil composes a splendid poem on ploughing, manuring, harrowing, and reaping. The parallels in modern times are too numerous to specify. Even in the age of Elizabeth and James we have Shakespeare retiring from the triumphs of the scene to his native Stratford, and henceforth immersed in the mysteries of leases and sheep buying. The most characteristic feature of our great novelist is that which represents him in the costume of a sturdy Lowland farmer. We have not, it is true, any great poem, like the *Georgics*, expressly devoted to the minutiae of agriculture; but all our poets delight in images of rustic life, and scarcely a statesman of the present, or the last, generation can be mentioned, who has not, more or less, employed the acumen which has enabled him to guide the senate, in the mysteries of growing turnips or breeding short-horns. Not only is his farm the delight and the pride of the English, as it was of the Roman, gentleman, but it is the ambition of every citizen who has saved a few thousand pounds, not to live in idleness in town, but to retire to work on a little farm in the country.

Why it is that agriculture is considered more gentlemanlike than trade we hardly know. There is nothing more ennobling in the "dirty acres," *per se*, than in any other kind of possession. And yet, if we consider the matter, we shall see that there is a difference. To gain money by buying cheap and selling dear, which is the soul of trade, tends to foster cunning rather than any higher quality, and certain it is that no one has ever, that we know, written a splendid poem on trade; while agriculture has not only produced the *Georgics*, but has supplied images and similes to all the tuneful race, from Homer down. 'Punch' is very fond of letting off bad jokes against the farmer; but notwithstanding all, we must say that there is something comparatively gentlemanlike about the genuine clodhopper. We always feel infinitely more at our ease, and less afraid of meeting with any offensive piece of vulgarity, beside the farmer's kitchen fire, than in the parlour of the little tradesman or attorney. Such being the love of country pursuits, which we may almost call inherent in the English character, it seems appropriate that Oxford, one of the great seminaries for the higher orders, and the upper section of our middle classes, should produce lectures on "Rural Economy." It is not, perhaps, to be expected that Christchurch men should attend dissertations on the growing of wheat and turnips, and the comparative merits of guano and farmyard manure. They will probably trust, for obtaining a knowledge of these things, to sundry walks which they take over the

stubbles and through the turnip-fields in September. Dr. Daubeny has therefore done wisely, as it seems to us, in conveying his instructions on "rural economy" through a classical medium, and instilling the most important principles of modern agricultural science by comparing them with those of the ancients.

His text-books are the treatises of Cato the Censor, Varro, Pliny, Columella, and the immortal poem of Virgil. To these he adds references to the many allusions to rural affairs which are to be found in all the classical poets.

Strange as it may appear, there is scarcely a single principle lately introduced into English agriculture as a new discovery that has not been, more or less, practised by the ancients. While men have been long arriving at some of the simplest contrivances of mechanical art in other branches, in agriculture they reached an early maturity; and the modern farmer might still find as many useful hints in the *Georgics* as in the 'Farmers' Magazine.' The practice of irrigation, of frequent ploughing, of hoeing the growing corn, the careful pulverization of the seed-bed, the exposure to the air of heavy soils, burning the land, the rotation of crops, the use of manure, particularly marl for light lands, and of the dung of birds and artificial manures, tile-draining, thin sowing, &c., are all alluded to by the classical writers. Then when we come to an enumeration of agricultural implements, we really seem as if we were reading one of Messrs. Ransome's or Crosskill's catalogues. Here we have regular turnip-hoes, clod-crushers, wheel-ploughs, with and without mould-boards; the *irpex*, which Mr. Ransome would call a "patent scarifier;" the *rastrum*, *sarculus*, *ligo*, and *pala*, all instruments to attain the grand object of modern culture, pulverization; the *bidens*, a kind of two-pronged hoe; winnowing machines (*vanni*); and finally a reaping machine! It is thus described by Pliny:

"*Galliarum latifundis valli prægrandes dentibus in margine infestis, duabus rotis per segetem impelluntur, iumento in contrarium juncto: ita directæ in vallum cadunt spicæ.*"

It may be thus translated:—

"In the large farms in the Gauls very large beams of wood, armed at the edge with opposing teeth, are driven on two wheels through the standing corn, the horse being yoked opposite (scil. to the teeth; that is to say, the teeth point towards the horse as he draws the machine); thus the ears fall on to the beam as they are torn off."

Dr. Daubeny translates *vallus*, "a hollow frame," and this was probably the form of it in this case; but we have never seen the word used in that sense in any other author. The expression *infestis dentibus*, seems to us to imply that the teeth, or straight sickles, were placed with their cutting edges opposite to each other, so as to separate the ear as it was caught between them. The existence of *latifundia*, or extensive farms in the plains of the Gauls, obliged the farmers to have recourse to machinery, just as it has, at the present day, obliged our large farmers to do the same.

The following directions for land-ditching or draining would delight the heart of 'Talpa.' It is Columella who speaks:—

"Again, the covered drains are to be made three feet deep, half filled with small stones or clear gravel, the earth that was dug out being thrown over them.

"If neither stones nor gravel are to be got, he

advises that twigs should be twisted like a rope, and formed to the exact thickness of the bottom of the drain, so as to be inclosed in it when pressed tightly down; and then that cypress or pine-leaves should be pressed down upon it, taking care, however, that at both ends of the drain two stones should be placed upright like pillars, having another laid over their top, to support the bank, and give a free ingress and egress to the water."

This would have been new to most of our farmers fifty years ago.

There is one capital point in which the ancient Roman differed from the modern English practice. The Romans appear to have paid little attention to the fattening of stock. Oxen were used chiefly for labour, sheep for the wool and milk; and Dr. Daubeny observes, in illustration of this, that there are no Latin words for beef, mutton, or veal. And yet the oxen which were sacrificed must have been eaten, not only by the priests, as Dr. Daubeny suggests, but by those persons who offered them, and surely both in Homer and Virgil there are many descriptions of sumptuous feasts on the flesh of oxen. Horace often speaks of a kid as a rustic treat, but classes lamb (*agninum*) with tripe, as the food of the lowest of the people. This dislike of strong animal food, if it existed, was no doubt partly owing to the heat of the climate; and yet pork, which is very heavy and nourishing diet, particularly the *sumen*, is celebrated by Martial.

But if the Romans were not great consumers of butcher's meat, they made up for it by a number of delicacies to which we are strangers. Thrushes were a regular article of consumption, and there were aviaries in which several thousands were fattened at a time. Columella's directions for fattening fowls might be useful to some of our thrifty farmer's wives:—

"Their pen should be warm and almost dark, so confined that the birds may not have room to turn, but with two apertures, one for them to put out their heads, the other for their tails and buttocks to protrude. The floor is to be strewn with clean straw, or soft hay, and the greatest cleanliness maintained; the feathers from the head and under the wings and loins being brushed repeatedly, and every kind of filth removed. Their food must be barley meal mixed with water, given more sparingly at first, but the quantity gradually increased to the largest amount which the fowl can digest.

"After it has eaten to repletion, it is allowed a little liberty, not so as to roam about to any distance, but only to enable it to peck what it can find, for which it may have a fancy.

"To render the fowl more tender, the water with which the meal is mixed is sweetened, and some add a little wine. Pigeons are fattened upon the same principle, young ones having their wing feathers cut, to prevent their flying, and their legs either tied or else broken, to prevent their moving about in their coop. The latter practice seems not only cruel, but, from the pain it would occasion, likely to impede the fattening process. This, however, Columella denies, contending that two or three days after their legs have been broken, they cease to suffer pain. The pigeon houses of the Romans were often of great size: Varro mentions their holding 5000 birds each: they were vaulted or roofed in with tiles, and furnished with one small entrance, but well lighted with large barred or latticed windows (*fenestra punicana*).

"The walls, carefully stuccoed, were lined with round-shaped nests with a single small aperture, opened formed of earthenware, one of which was intended for each pair.

"The other birds kept by the Romans as articles of food, were turtle-doves, peacocks, thrushes, quails, geese, and ducks. Columella

also distinguishes the breed of fowls, now called gallinas, by the name of melesgrides.

"For the feeding and care of each of these, our author gives us particular directions. In many cases their water-birds were not only provided with a suitable piece of water, but were even enclosed within a wall 15 feet high, and with a net stretched over it. This was called *neusotrophium*."

"Varro also gives us a detailed account of a preserve for dormice (lib. iii. c. 15), which was to be paved, to prevent the animals from escaping, and to have within the enclosure oaks to supply them with acorns. But when the mice are fattened for the table, they are to be kept in the dark in stone jars, and fed with acorns, walnuts, and chestnuts."

We do not happen to have a copy of Varro by us, but our impression is that the word translated "dormouse" by Dr. Daubeny, is "glis," and that the preserves were called "gliraria." The "glis" is the pretty little animal known in France as *le loir*. It is much larger than the dormouse, and becomes extremely fat, whence its English name, the "fat squirrel," as given by Bewick.

To his very interesting analysis of the before-named works on agriculture, in which he shows among other things the decline of the art in the latter ages of Roman greatness, when it became dependent on slave-labour, Dr. Daubeny adds a useful dissertation on the horticultural nomenclature of the Greeks and Romans, and endeavours to refer the classical names of plants to their modern representatives. This is by no means an easy task, and many names have altogether eluded his ingenuity. The meaning of classical terms is well illustrated by plates, from ancient drawings of plants and agricultural implements and operations.

Dr. Arnold was the first English commentator who gave life to the study of the classics, by bringing the facts and manners which they disclose to the test of real life; we cannot pay Dr. Daubeny a greater compliment than to say that in these lectures he has carried out Dr. Arnold's principle, in the very interesting line of study which he has made his own.

*Sinai, the Hedjaz, and Soudan: Wanderings around the Birthplace of the Prophet, and across the Ethiopian Desert, from Sawakin to Chantum.* By James Hamilton. Bentley.

"THE most remote parts of the world," says Herodotus, (lib. iii., cap. 106.), "are in some way the most favoured," and he immediately proceeds to adduce India and Arabia as illustrations of his remark. As regards the former, the observation is doubtless to some extent just, but his own description of Arabia shows how entirely its claim to the envied appellation of Felix depended on the capricious fashion of his day. "It is," he says, "the only country in the world that produces frankincense, and myrrh, and cinnamon, and cassia, and ledanum." So long, then, as Frankincense and Co. retained their place in the estimation of the world, so long as worshippers could be persuaded to deem them essential to the propitiation of the gods, and magi laid them in the same casket with the gold destined for kings—so long did men continue to think and speak of Arabia as they now think and speak of California or Peru. Now all is changed, perfumes have become things of comparatively small account, and any one wishing to support the old historian's theory of the superior felicity

των ἐσχάτων της οἰκουμένης, would be more likely to adduce New Zealand as an illustration than Arabia. The charm is broken, and the fabulous dragons which Herodotus believed to guard the precious trees have taken their treasure with them. Modern history affords a similar instance of a remote corner of the world being forced into great temporary importance by the extravagant over-valuation of a peculiar product. There was a time when all Europe was ready to contend for the Moluccas; they have now been left for two hundred years in the unmolested possession of one of her weakest states; and posterity learns with incredulity that, less than three centuries ago, battles were fought and nations embroiled for the sake of the little nut that imparts a pleasant flavour to our rice puddings.

The very splendour of the accounts which Herodotus, and yet more eminently Diodorus, give us of Arabia Felix, the present Yemen, proves their sole foundation to have been hearsay, while modern descriptions amount as yet to precisely nothing at all. Mr. Hamilton is well aware of the magnificent field thus open to the first enterprising traveller, and we can readily enter into the regret which he expresses at his inability to realize either of his favourite projects—the exploration of Arabia and the ascent of the White Nile. Compelled to limit his achievements by his opportunities, he has performed the lesser task in a manner that amply justifies his ardour to undertake the greater. We have rarely seen a volume more replete than his with the genuine spirit of the traveller. His notions of travel are æsthetic, not utilitarian; he does not seek for profit, like Marco Polo, or for knowledge, like Miss Martineau, or for fame, like Bruce, or even for adventure, like Borrow and Byam. Travel is to him rather one of the fine arts; a smart ride in the desert is something to be proud of, like a felicitous stroke in a painting, and a stirring incident seems an unconscious aspiration realized, like a dim thought expressed with unexpected energy in verse. It is obvious that this exalted estimate of the beauty of travel cannot be held without a corresponding sympathy with the people among whom the journey is performed, and accordingly we are not surprised to find our voyager's tone of thought and narrative throughout candid, generous, and, we will venture to add, just. Travel, it should be remembered, is after all merely the sum of a number of small incidents, and when the majority of these are agreeable, and some exquisitely delightful, the general effect results in a sort of fascination, which Mr. Hamilton expresses better than he explains in the following passage:—

"What is the attraction defies definition; it can at most be expressed faintly by negatives. Climate has assuredly some share in it, but it is more than the bright sun and cloudless sky. It is not the earth, for the paradise of old days is turned to a desert; fever broods over the marble ruins of once populous cities, and even the Nile-land, still the Eden of Turkey, has not been trod with impunity by the Ottoman horse-hoofs. It is not society, for good coffee and pipes, even with the addition of whole seas of sherbet, cannot constitute society, still less those rare symposia, where the *causerie*, unknown to the Oriental, is poorly replaced by the nasal screeching of singers and the cling-clang of the *Kannun*. The student will find more learned Orientalists, more books, more facilities for his pursuits in London, Paris, or Vienna, than in Cairo and Damascus. The sybarite will miss the fabled luxury, which exists only for a few of the

mighty satraps, and which, even in their palaces, offers few temptations to the European. To the glutton, accustomed *quæ ad beatam vitam pertinent*, *ventre metiri*, the East has even less to offer. But while in the West young men are old, in the East man and nature seem to enjoy a perpetual spring. By degrees we learn to appreciate, and even to partake of, the serenity which the very air inspires. Time slips by, but we neither remark its passage nor feel its weight. Day succeeds day; we feel that we have lived, but not that we grow older,

"E l'uom d'esser mortal par che si sdegna."

It is not the happiness of the Italian, but rather the imperturbable equanimity of the philosopher into which we subside; not the egotistical apathy of the recluse lost in the contemplation of his own navel, but the intelligent sympathy of the looker on in a game he is ready to join in, when called upon. One is astonished at the youthful spirit of white-bearded old men, and the elasticity with which they bear up under unexpected reverses of fortune, not less than at the serenity with which they receive her favours. If they have made small advance in the education of the mind, one feels that they have not neglected that of the heart. We are at first struck by the apparent intellectual poverty of such a life, but we soon learn that it is rich in sensations, not the less vivid that we must seek them in ourselves. The restless activity of eternal life in the nobler nations of the West, has in great measure destroyed in them the interior self-sufficiency (if I may coin a word) which is the characteristic of the Eastern. Of course I speak of the common herd, not of exceptional men, not of those who think, well or ill, for their whole generation. No one who has mixed with the middle and lower orders in the East can have failed to remark that the Oriental is pre-eminently a thinking being.

"I might go on through pages, still leave much unsaid, and still fail to convey the idea, which I am seeking. I shall content myself with saying, that it is to the Old-World tone of Oriental life, to its trustfulness in God and self, to its individuality in short, that I am inclined to ascribe the charan which I cannot escape, but which escapes my pen."

Quitting the metaphysics for the actualities of travel, we find that the sequence of Mr. Hamilton's adventures is accurately conveyed by the order of the proper names on his title-page. First he went from Egypt to Sinai; then he journeyed down the Red Sea, spent some time at Jidda and Tayf, and fraternized with the Sherif; finally he crossed over to Africa, and travelled from Sawakin on the Red Sea to Khartoum at the junction of the Blue and White Niles, whence he returned to Egypt by the usual route. The scenes likely to present themselves to the wayfarer on such a path as this are already familiar from multitudes of descriptions, and Mr. Hamilton's pictures can only claim the distinction of a somewhat unusual vividness of colouring. To this, however, they are fully entitled. We turn from their contemplation with a really living idea of the accompaniments of an African ride, the dull yellow plain, whose scorched sands seem panting from or for the scorching—the distant round hills treeless and lurid in the fierce sun, the long frowning defile of purple and yellow rocks, the gaping watercourse dry and split with heat, the solitary palm, under which men and camels huddle at noon, the thorny waste of brushwood bent down here and there by the tracks of lions. Nor are brighter strokes wanting; here a broad low river subdues the glaring sands with vegetation, and keeps a pleasant whisper round the perpetual verdure of rushy islets; there the traveller leaps from his camel beneath the date tree, and instantly the faces of man and beast are buried in the well, whose brown earthy water is for the



moment infinitely more precious than all the expanse and all the treasures of "the hollow-sounding and mysterious main."

Mr. Hamilton's opinions as to Oriental character are much what we should have expected. The Arabs, he says, are noble and independent, notwithstanding their universal habit of begging; the Turks, with some creditable exceptions, lazy, sensual, and rapacious. Still even Turkish pashas can be just sometimes, as we may learn from the following story, a curious instance of the grotesque propriety that so frequently accompanies the most arbitrary sentences of Orientals:—

"There is a village sheikh still alive in Kordofan, who can bear witness to the Defterdar's application of a sort of Lex talionis. This sheikh had made a bargain to keep his excellency's dromedaries for a certain monthly sum, and he fancied he had discovered an economical way of keeping them in good condition by turning them into the durrah fields of the peasants, not supposing that complaints of trespasses committed by the Defterdar's camels would for a moment be listened to. In this he showed a clever appreciation of Turkish character, but like many clever men he generalised too rapidly and made no account of exceptional cases. He soon discovered that he had fallen upon one. The fellahs, not yet broken in to the habits of Egyptian servility, lost patience as they saw their growing crops devoured, and in a body waited upon the dreaded generalissimo. He immediately assembled his divan, and summoned the sheikh to answer the people's charges. Of course he pleaded his perfect innocence, throwing any blame there might be on his excellency's camels, which he acknowledged had shown a wayward taste for growing corn, a taste natural in the cattle of so exalted a personage, and which he, a poor village sheikh, could not of course venture to control. After listening with exemplary patience to the defence, and calling on the people for a reply, the Defterdar deliberated with his counsel and pronounced judgment. The camels were found guilty of eating what in no way belonged to them, but they, being endowed with no sense of discrimination, could not be held answerable for their misdoings, while the sheikh, who was receiving money for their entertainment, was evidently for the time in *loco parentis*, or next friend, and as such responsible for their good conduct. He, therefore, must be considered as having eaten the crops, for, *quod fecit per alium, fecit per se*. On him, therefore, the punishment of so great an enormity must be inflicted, and none could be more appropriate to the justice of the case than the immediate extraction of all his teeth, that he who had thus (by deputy) devoured the goods of the poor, should for the remainder of his life be deprived of the power of masticating even his own. No more complaints were made of the illegal appetites of the camels, and there being no philanthropic dentists in Soudan to supply sets of *osmore* teeth better than Dame Nature's, the sheikh has ever since subsisted on a spoon-meat diet."

The political situation of Nubia and the Hedjaz corresponds in this respect, that in each country the indigenous race is under the dominion of a foreign power. While, however, the Turkish sway in Arabia is lethargic and insecure, the Egyptian administration of Ethiopia is vigorous, and supported by an amount of force which the natives will find it very difficult to overcome. Both are oppressive and extortionate to the last degree, but it is singular that in Arabia, where the unsubdued bearing of the tribes holds the Turks in some respect, the development of material prosperity has been much less marked than in Nubia, which lies entirely at the mercy of the conqueror. Since the Egyptians possessed themselves of the country, Khartoum and Kassala have risen from insignificant villages to important towns, and

their progress would assuredly be yet more rapid could the regular pursuits of industry be substituted for the debasing gains of the slave trade, a traffic which, in Mr. Hamilton's opinion, a simple remonstrance from England would prove amply sufficient to repress. The propriety of such remonstrance being made is one of his most favourite ideas, and is frequently reiterated in company with his schemes for an ascent of the Nile by steamers, an extensive system of irrigation in Nubia, and the purchase of Masuah from the Turks to secure for ourselves the one inlet into Abyssinia. We quite agree with him that the interest of England points strongly in this latter direction. Our volcano fortress of Aden may be justly compared to a ring, on which hang all the keys of Egypt, Ethiopia, and Arabia. Let us but once be enabled to call the whole bunch our own, and immense regions may be kept under our control by a few regiments, and to assail our Indian Empire through the Red Sea will be like creeping through a cannon to get at the artillery-man.

We have sufficiently expressed our opinion of Mr. Hamilton as a voyager, and have only to add that his book is not without indications of ability to excel in quite another sphere of literary activity. We know not what opinion will be formed of his chapters on Mahomet and Mahometanism by those who think the great Arabian prophet the second beast in the Revelations, but they seem to ourselves proofs of that capacity for entering into foreign habits and alien modes of thought on which it, after all, mainly depends whether a man's travels shall be profitable to him or not.

*Autobiography of Lutfullah, a Mohamedan Gentleman; and his Transactions with his Fellow-creatures: interspersed with Remarks on the Habits, Customs, and Character of the People with whom he had to deal.* Edited by Edward B. Eastwick, F.R.S., F.S.A. Smith, Elder, and Co.

THE hero of this autobiography, for the integrity of which Mr. Eastwick vouches, was born in the ancient city of Dharanagar, in Malwa, in 1802. His father was a Mohamedan of the sacred order, and he shows us, by a pedigree which he exhibits in the front of the book, that he had the honour of descending in a right line from Adam. There is, no doubt, some novelty in the notion of a Mohamedan "gentleman" writing and publishing his own life in intelligible English; but beyond the interest attaching to that fact there is very little in this volume to reward the curiosity it will excite. Lutfullah's career contains few incidents worth relating, and his powers of observation are by no means equal to the task of imparting a social or historical value to his narrative. He is literally an Indian adventurer, cast upon his own resources for subsistence, a character of which innumerable examples abound, although, to the credit of our learned Moon-shee, few amongst them, if his own account of himself is to be credited, have passed through such motley experiences with so fair a reputation.

Lutfullah lost his father when he was four years old. The only means left to him and his mother for their support was one half of a grant of about 20*l.* a year, arising from the lands attached to a Hindoo temple; and even this wretched 10*l.* was held under the constant terror inspired by the designs of

relations who inherited the other moiety, and who meditated the destruction of our hero and his mother, in order to get the whole into their possession. We need not follow the history of Lutfullah's childhood. The reader will, probably, not care to learn that after a few years Lutfullah was able to pronounce accurately, and that he took great delight in silly putting frogs into ladies' work-baskets. Passing on to maturer incidents, we find him seeking employment from a troop of Afghans, who turn out to be a band of robbers, and, after several months of rapine and bloodshed, at the close of which the Afghans are nearly cut off to a man by their comrades, the Bheels, Lutfullah contrives with great difficulty to effect his escape. He next obtains a situation as a post-office clerk under the Company, which he holds till the office is abolished. Thrown again upon his ingenuity, he becomes a teacher of Persian, Hindostani, Arabic, &c., and succeeds tolerably well. There is some little inconsistency, however, in this part of his story, for he afterwards tells us that he began the study of Arabic at a later period. But at whatever time he acquired his knowledge of languages, it appears that he trusted mainly for the rest of his life to his skill as a linguist, and that he ultimately became a proficient in English, as this book satisfactorily testifies. Amongst the employments he held as interpreter was one in the household of a prince, which he was glad to resign in order to escape from the corruptions and abuses of the court. The picture from which we take the following passage is characteristic of the intrigue and venality which pervade these eastern royalties. The young prince had just been married to the daughter of Sindiah, and everybody concerned in the pompous ceremonies was dismissed with presents:—

"The dresses, etc., given to the persons of rank on the night of the last entertainment were immediately upon our return home collected by the minister's people and deposited in the Government treasury, for the purpose of taking a despicable advantage, highly unbecoming the character of those who assume the title of Sarkar, or the head of a State. These dresses, etc., were exchanged in the market for some of lower price, which were distributed amongst all, before leaving the camp of His Highness. As for myself, I was left unnoticed, in anxious expectation, until we had reached more than half way towards home. On the day of our halt at Bhilsa a clerk came to me with a servant bearing a bundle, which, after seating himself by me, he opened, and taking out a turban and a pair of shawls, he delivered them over to me with the minister's compliments. I found them far inferior to what I had received from the original donor, and besides missed a necklace of pearls, worth about two hundred rupees, which accompanied my dress. I asked the man if he knew any reason for the reservation of the first article of the three presented to me at the Court of Sindiah. He replied in the negative, with a scornful smile at the conduct of the authorities, hinting in figurative language, to avoid being understood by his companion, that the calamity was a general one. Being obliged to submit to the treatment, I received the present, as he advised me, with an expression of feigned gratitude."

Lutfullah afterwards joined the British cantonment at Satara, where he remained six years, teaching young officers, and realizing a sufficient income to enable him to take a wife. His marriage does not appear to have been a very happy one, although, with an inconsistency not unfrequent in his work, he afterwards speaks of his wife in terms of the most



fervent attachment. He is in theory a pious admirer of the Mahomedan law of marriage, notwithstanding that he remained a monogamist all his life. In the treatment of women he thinks the Eastern system incomparably the best, and condemns, in the strongest language, the vices that are generated by the general intercourse to which women are admitted in Europe. Seclusion from the society of men he considers indispensable to female purity and protection. What would a lady of Mayfair, with a family of blooming daughters, say to the introduction into her house of the Mahomedan mode of domestic retirement?—

"I do not say that all Mahomedan ladies are virtuous. Virtue and vice are two sisters, the former fair and the latter black; and no nation has ever been and shall ever be uninfluenced by the two ladies. But limits and restraints prescribed by the Mahomedan law and usage in domestic affairs, I am bound to say, at all events prevent increase in vice and decrease in virtue. The time of the Mahomedan ladies being occupied in needlework, in the performance of their religious duties five times a day, in looking over their kitchens, and other household affairs, they have no leisure to think of admirers. Their marriages are arranged by their parents, who are their best friends, and whose experience in worldly affairs must be greater than theirs. Opportunities are in general afforded to the bride to see her would-be husband from a loophole or a window before she is married to him; and no matrimonial contract is considered binding, unless the lawfully attested consent of both parties is first obtained, and taken down by the law officer appointed by the government to solemnize the marriage. Thus many bitter feuds and lasting animosities which poison the minds of contending rivals are avoided, and marriage beds are not only free from contamination but from the dread of it. In short, seclusion secures women from those delusions and temptations which irritate the mind with fleeting joys, leaving behind the permanent sting of bitter remorse; while, never having tested the universal triumph and dominion which beauty gives in the circle of Europe, the pang of lost power is not added to the painful sensation of fading charms."

Having now run through many changes, Lutfullah next attempted to practise medicine, of which he had picked up a smattering in the service of an old physician; but he soon wearied of the unprofitable drudgery, and an opportunity having been opened to him, he entered into the service of the old Nuwab of Surat, the father-in-law of that Meer Jaffir Ali, who is so well known in the London circles. He found the old Prince surrounded by a crowd of rogues and rascals, and familiar as he was with the corruption of such establishments, he could not endure the contamination of a service in which honesty was an impediment to success, and at the end of a few months he resigned his situation. Fortunately, he is not long in obtaining fresh employment. Lutfullah, like a cat, always falls upon his feet; and upon this occasion the exchange is for the better. His friend Mr. Eastwick, being appointed assistant to Colonel Pottinger in Scinde, takes Lutfullah with him, and afterwards, when he is himself returning to England, gives him an introduction to Mr. Pelly, who transfers him to his deputy, Mr. Langford. In his new service, as a sort of interpreter, he again visits Surat, just as the old Nuwab dies. The state in which matters were left at his death affords an instructive illustration of the condition of most Oriental thrones under similar circumstances:—

"His young son-in-law's grief, confusion, and distress were at this moment inexpressibly great. I prevailed upon him, however, to write an express

letter to his father at Baroda, whose experience and timely aid he so particularly required at this critical juncture. After this, at my earnest request, he sealed the Treasury Rooms, with the account books and records, &c. At dawn we broke the seal of the treasury again to take out some money for the funeral expenses, but to our astonishment we found in the money chest nothing but a vacuum, though the sum of 8,333 rupees, 5 annas, and 4 pices of the Nuwab's monthly pension had been received from the Collector's Treasury only two days before. The Minister's pretended grief for the loss of his master was so great that he could not say how the money obtained its wings, and flew away in so short a time, and his subordinates' mouths were closed. The rooms were then locked and sealed up again, and Mir Jaffir Ali got from his own banker five hundred rupees for the funeral expenses. It is a most remarkable thing that a man, having an income of nearly two lakhs per annum, had not at the time of his death sufficient money in his treasury to defray the charges of his own first stage to the other world."

Meer Jaffir Ali, taking Lutfullah and Mr. Scott with him, proceeded to Bombay, and subsequently to England, for the purpose of prosecuting his claims; and the few remaining pages of the volume are occupied by a hasty outline of the Mahomedan gentleman's experiences in England, and his opinions thereon. They are not very original or striking. His first impression of the English character was derived from an incident on shipboard. Meer Jaffir Ali was cold, and requested Lutfullah to fetch him a certain blanket, which appeared to want an owner:—

"I proceeded thither to fetch it, but Mr. Scott prevented my doing so, telling me in a very rough manner, as if we had never known each other, that he was the first person to seize upon the blanket, and he would not allow his father Peter to take it from him until he had done with it. I told him that I did not want it, but that his master required it very badly. 'I would not,' replied he, 'for the world kill myself for others, you may tell my master.' But there was no need of telling the master, as he overheard and understood what passed between us. This showed clearly that selfishness was the general character of John Bull."

As an example of judging of a nation from an individual this specimen is, perhaps, as complete as need be desired. When he afterwards came to know a little more about us, he appears to have been struck less by our selfishness than by our extraordinary folly in reference to women:—

"I may now sum up the character of the English, by saying they are entirely submissive to the law and obedient to the commands of their superiors. Their sense of patriotism is greater than that of any nation in the world. Their obedience, trust, and submission to the female sex are far beyond the limit of moderation. In fact, the freedom granted to womankind in this country is great, and the mischief arising from this unreasonable toleration is most deplorable."

Yet, notwithstanding this reproof, Lutfullah betrays as much weakness as John Bull in the presence of the "handsome" ladies he meets in the London salons, and, as the following anecdote evinces, was not slow in acquiring the arts of flattery and submission:—

"On the 14th, we went to an evening party at Lord Ashley's. His lordship and his beautiful lady received us with great courtesy. Here we had the pleasure of being introduced to Viscount Jocelyn and his wife, the loveliest of English beauties. After a little while I had the honour of playing at chess with this nymph of Paradise. I played two games with her, and allowed myself to be beaten both times to please her."

There is nothing in the book more curious

than the allusions to the indelicacy of the English. Lutfullah is shocked at the opera:

"At half-past eight the curtain was pulled up, and two very handsome ladies, very indecently dressed, and an old man, representing their father, appeared on the stage. They sang, I fancy, some historical ballad, in conjunction with the instrumental music, and danced very expertly. Whilst the females whirled round in their dancing, their short gowns flew up to the forbidden height. Tantalizing the assembly it appears was their principal aim by such a violation of decorum."

This expression of modesty is in perfect keeping with that Mahomedan piety which strictly observes the forms of prayers and ablution in the midst of the commission of the most atrocious crimes, of which we have several instances in the volume before us.

One of the sights that greatly surprised Lutfullah in London was the aspect presented by the heads of the footmen:—

"Palaces of nobles and dukes are distinguished by their large porticos and superior construction. In one of them I saw two well-dressed men with ashes sprinkled over their heads, and thereby concluding that some death might have occurred in the house, I told Mr. Scott, who sat by me, that a mournful event might have been the cause of the dust on their heads; but the young man laughed at my beard, and said it was the old custom still preserved by some of powdering their hair."

Another thing that attracted his attention was the variety of uses to which we apply iron:—

"The first objects that engaged our attention were the enormous bridges in the city, especially the iron bridge and the swinging bridge. It astonished us greatly to see large masses of cast iron regularly fixed and nicely cemented together in these useful fabrics. The country, we felt convinced, must have some inexhaustible mines of this metal, which is so necessary for man; for, besides these bridges, iron appears to be used very profusely. No house seemed to be without iron railings, iron bars, and some houses are even roofed with iron, and some gardens edged with iron bars."

Having seen what Lutfullah thinks of England, we will allow him to say something respecting his own country; and perhaps the most remarkable scene in the work is an account he gives of a suttee which he witnessed in company with an English officer, who in vain endeavoured to persuade the victim, a beautiful widow of about fifteen years of age, to abandon her purpose. Passing over the introductory matter, here is a true description of a suttee, written by a native:—

"The pile now being ready, the corpse was washed and laid inside, and about half a pound of camphor in a bundle tied round the neck of the damsel; she got up with her usual alacrity, invoking her gods, and rushed to the fatal spot in the same way as a moth to the flame. She then walked round the pile seven times, and having entered it, she placed the head of her dead husband in her lap, and herself holding a burning wick between the big and second toes of her left foot, she set fire to the combustibles interwoven with the logs of firewood. Upon her entering, the Brahmans began to stop the entrance with heavy pieces of timber, when Dr. Kaye, being much excited at the scene, could not keep silence any more. Though he knew very little or nothing of the language, he called out with as much fierceness as he could command, 'You scoundrels, this is not fair; darwaza mat kholo' that is to say, 'do not open the door,' of course meaning the reverse. Such erroneous expressions of the good doctor, even at this tragical moment, produced a smile from most of the bystanders. Immediately the poor woman set fire to the pile, the Brahmans and others surrounding it began shouting out the name of their god, Ram, &

and ordered the kettledrums, flageolets and cymbals that accompanied the procession to be beaten and played, and rent the air with their cries, in order that no cry of distress might be heard from the victim; and, as soon as the flames issued from all sides, they cut the ropes of the four corners of the platform of the pile with their hatchets, so the enormous weight of the firewood, falling at once upon the delicate girl, crushed her in a moment. In short, in about fifteen minutes' time all the fuel became a heap of ashes, the music and the cries ceased, and the party of the executioners, being tired, seated themselves in calmness under the tree, in expectation of the embers being extinguished, that they might throw the ashes into the river and return home. We then hastened to our own places of rest, sad and dejected from what we had seen."

Considering the restless and marauding lives of the bulk of the Mahomedans who are thrown upon the world like Lutfullah, this book is singularly destitute of dramatic versatility. It is remarkable for the sobriety and respectability of its contents, rather than for its novel or picturesque details. But being a veritable autobiography, it possesses at least the attraction of truth, and its sketches, scanty as they are, of such places as Agra and Delhi, will be read with interest at the present moment.

*Epitaphs from the Greek Anthology.* Translated by Major Robert Guthrie Macgregor. Nissen and Parker.

As Proverbs are condensed expressions of the practical wisdom and wit of a people, so Epitaphs may be regarded as embodying the popular philosophy and religion. Whatever varieties of detail may belong to individual memorials, there is a prevailing tone in such inscriptions, answering to the common sentiment and belief on all points relating to the destiny of man. The creed of any country or nation on these subjects will be found engraven on the tombstones of its people. If all the records of their historians and the works of their philosophers had been lost, the monumental and written epitaphs of the Greeks would have shown to us how much they knew and guessed and hoped about matters which have been brought to light by Christianity. We learn, too, from these memorials many valuable facts illustrative of ancient customs and national manners, with glimpses of social life and domestic usages not commonly found in ordinary records. But we confess that these, though more curious, have not the same interest that belongs to the obituary tributes as illustrative of the religious creed and sentiments of the ancients apart from divine revelation. There is a dreary vagueness and coldness even in the most hopeful of the Greek epitaphs, strangely contrasting with the warm and genial light thrown over a Christian cemetery by truths unknown to the wisest of the Greeks. Here are some specimens of the better sort.

"Why travail we and children bear? Far better would it be  
Never to know a mother's name than thus a dead son see.  
This monument a mother o'er her young Bionor set:  
'Twere fitter sure that she from him this duty should have met."

"O mortal! nothing as immortal deem,  
Since hol's this coffin e'en Cassandra's dust.  
In whom the Immortals' nature most did beam—  
Nought now in life is worthy of our trust."

"Pass not this tomb, O thoughtless traveller! by,  
With hurrying footstep and with careless eye:  
Stay, see, and ask who, whence she was? then know  
Harmonia here, of Megara, lies low.  
In her all centred which gives fame on earth,  
Virtue and prudence, loveliness, high birth;  
Whose tomb you see was such: from Heav'n's high ways,  
Loos'd from the flesh, her pure soul earth surveys."

"Be careful of thy days, nor sail, O man!  
Save with fair skies, since short of life the span.  
On trade the wretched Cleonicus bent,  
From Colosyria to rich Thasus went,  
Went as the Pleiads set, on trade o'er sea,  
And, with the sinking Pleiads, so sank he."

"We buried Melanippus here at morn:  
As set the sun, her virgin bosom torn  
By her own hand, the young Basilio lay;  
For, plac'd upon the pyre her brother's clay,  
She brook'd not life: and thus a double blow  
Plung'd Aristippus' house in deeper woe,  
While all Cyrene with their sorrow griev'd,  
So richly blest! so wretchedly bereav'd!"

"Let this small stone of my great love for thee,  
O best Sabinus! the memorial be:  
Still shall I seek thee lost: if in the grave  
Memory survive, forget not me, I crave.  
"Unpitied Hades snatch'd me as his prey,  
A boy of five, in spirit free and gay;  
Lament me not! though short my life has been,  
Few also of its ills and griefs I've seen."

"Παῖδά με πεντάτρων, ἀνδρῶν θυμὸν ἔχοντα,  
Ἡρώδης Αἰδὸς ἤρπασεν, Καλλιμάχων.  
Ἀλλὰ με μὴ κλαίεις· καὶ γὰρ βίωτοιο μετέσθον  
Παῖδρον, καὶ παύρων τῶν βίωτοιο κελὶν."

We give the original of the last lines, to show that the translator keeps as close to his text as his adoption of metre will permit. The versions are generally very literal and accurate, the object which the author chiefly proposed, the poetical form being merely used for the sake of classical recreation, and not to be severely criticised where faithfulness of rendering is attained. The sentiment about escape from the ills of life is humorously expressed in one of Julian's epitaphs.

"A Cruel is Charon.  
B Rather kind.  
A He now has snatch'd away  
One young in years.  
B But who in mind was equal to the gray.  
A For him life's pleasure all is past.  
B For him all pain has ceas'd.  
A He knew not aught of marriage joys.  
B Nor marriage ills the least."

Freedom from bondage, and the levelling of all distinctions in the tomb, naturally form frequent themes.

"This man so late a slave when full of breath,  
Equals the great Darius now in death."

In the same strain are these two, not included in Major Macgregor's collection:—

"Ζωσίμη ἢ πρὶν ἔσθαι μονὴ τὸ σώματι δούλη,  
καὶ τὸ σώματι νῦν εὖρον ελευθερὴν.  
"Zosima, who, in her life, could only have her body enslaved,  
now finds her body, likewise, set at liberty."  
"Δούλος Ἐπίκτετος γενόμενος, καὶ σὺν ἀνέπρως,  
καὶ πενήν' ἴσως, καὶ φίλος Ἀθανασίους.  
"Epictetus, who lies here, was a slave and a cripple, poor as the beggar in the proverb, and the favourite of heaven."

In fact, the whole elegiac poetry of Greece is but an elegant commentary on the words of the sacred book of Ecclesiastes, but without the glimmerings of the light shed across the dark stream by the gospel, with its assured hope of resurrection to immortal life. Sometimes the doubts of the Greeks were uttered in bold scepticism, as in these lines of Callimachus:—

"A Rests Charidas beneath this tomb?  
B Here I,  
Son of Arimnas of Cyrene, lie.  
A Charidas! what's the fellow?  
B Eternal night.  
A What your returns to earth?  
B A falsehood quite.  
A And Pluto?  
B But a fable: all as one  
Body and soul are ended and undone.  
Soft words you'd have of me, I speak the true,  
An ox in Hades fares as well as you."

But in matters within the province of human reason and virtue, noble are the sentiments that are recorded in these memorials. Not only private affection but public spirit has here its expression. The patriotism of the Greeks was even in death a ruling passion, and many were the epitaphs in the same strain as that memorable one over the Spartan heroes of Thermopylae:—

"Stranger! tell Lacedaemon here we lie,  
Proud, in obedience to her words, to die."

This is the well-known couplet of Simonides,

which gained the prize for which Æschylus was among the competitors. Dean Gainsford gives some lines by Simonides, the fragment of a hymn on the same national subject:—

"Who stood at stern Thermopylae to die,  
Their lot was beautiful and fortune high,  
Their tomb an altar, where all Hellas pays  
For triumph tears, our memory their best praise:  
Such sepulchres as have the good are theirs,  
Safe from decay which Time the tyrant spares.  
Of Greece the ancestral glory in their grave  
Lies well embalm'd. This noblest witness gave  
Leonidas, of Sparta King, for whom  
Fame's brightest wreaths of deathless virtue bloom."

Major Macgregor's book, we need scarcely remark, embraces a wide range of elegiac poetry, and is not a collection of mere epitaphs. He has followed pretty closely the Seventh Book of the Greek Anthology of Jacobs (Leipsic edition, 4 vols, 8vo, 1813—1817), adding sepulchral memorials and brief pieces on allied subjects from various sources. To those who have not the means of perusing the original, this volume of metrical translations will give a very fair idea of the spirit and specimens of the language of the sepulchral and elegiac poetry of the ancient Greeks.

*Nearer and Dearer; A Tale out of School.*  
A Novelette. By Cuthbert Bede, B.A. Bentley.

It is related of Balzac, that he once perambulated nearly the whole of Paris in search of a name for the hero of his book. At length the mysterious appellation, which had been dimly adumbrated in his imagination, appeared over a shop-door. "There," said he, "is the name of a great man; I will hand him down to posterity." It turned out, on closer inspection, that the owner of the heroic name was a tailor.

Like Balzac, when we saw the name of "Cuthbert Bede" in an advertisement, as the author of a book, we figured to ourself a very venerable personage, and we supposed that his book must be of the gravest and deepest. The *nomen* of the great historian of the Anglo-Saxon church, preceded by the *pre-nomen* of the most austere of Anglo-Saxon saints, gave rare promise of gravity and wisdom; for we are told, that even at the age of eight years, Cuthbert was warned by an angel that to "pleye atte balle" was too light an amusement for one destined to be a master in Israel:—

"Cuthbert, it falleth nought to the with yonge children  
to pleye,  
For no suche Idelle games it ne falleth the to worche  
Whanne God hath yproveyed the an heved of Holy  
Chirche."

What was our astonishment, then, when we opened a book written by "Cuthbert Bede, B.A.," to find it thickly interspersed with engravings of billiard-players—"pleyeres atte balle"—in all those astounding attitudes into which adepts delight to throw themselves; not to mention pictures of young ladies of the most charming *townures*, hanging round the necks of young gentlemen with moustaches and all-round collars. Oh, Mr. Cuthbert Bede, B.A., think of your namesake and patron:—

"The bygan Seint Cuthbert for to wepe sore,  
And by-levyd all this idel game, nolde he pleye no more!"

But we fear that Mr. Cuthbert Bede is incorrigibly facetious. This is the second of fence which he has committed against gravity and his name; for he may say, in the words of Euripides, "Ille ego qui quondam" narrated, in laughter-provoking prose, the adventures of Mr. Verdant Green, that delight of schoolboys and undergraduates.

After the shock—the jar—which was com-



municated to our nerves by the discord between the matter of the book and the writer's name had passed away, we must own that 'Nearer and Dearer' afforded us that enjoyment which, next to a good sneeze, we most heartily prize; we mean a good laugh. There is nothing new in the characters, it is true; the wit is not of the highest kind, consisting chiefly of that description which, as Barrow says, "playeth in words and phrases, taking advantage from the ambiguity of their sense, or the affinity of their sound;" but there is such an uninterrupted flow of animal spirits from the beginning to the end, that a man must be a perfect cynic not to be in some degree carried away by it. It is like one of those little vaudevilles in which Madame Vestris and Charles Mathews used to take their audiences by storm, but with a strong infusion of undergraduate reminiscences which go straight to the heart of one who has, alas! long since bidden adieu to the carelessness of that *insouciant* and happy period of his life. But the sentimental passages are by far the most laughable parts of the book. There is something extremely ludicrous in the *naïveté* with which the author requires us to believe that young baronets from Christchurch, whose chief amusements are hunting and billiards, and "honourable" guardsmen from St. James's, are possessed of every virtue, among which candour, unworldliness, and disinterested affection are conspicuous. Then how delightful and how amusing to find not only the hero and heroine, but her brother, and the fat page and the pert waiting maid, all made perfectly happy in about a hundred and fifty pages! It is a vast relief, after having been obliged to arrive at the self-same conclusion in the process of a three-volume novel.

Of the facetious part the following is a good example. It is a dialogue between Fido, a page in the "Minerva Academy for Young Ladies," and Dolly Dot, the maid:—

"And now, sir," said Dolly, coming to the point; "who is Harabellar?"

"Well!" said Fido, who was inclined to fence with the question, "I don't see that I'm obliged to tell you, neither. However, I don't mind, just for once. Perhaps it'll mitigate my sorrows! Listen, Dorothea! My Harabellar is Miss Harabellar Sophiar Robinson, at present a inmate of this academy." And Fido warmed his back at the fire, and looked around with a triumphant air at the crayon heads in the leather-work frames, as who should say, "Behold me! the Don Juan of livery."

"Little Miss Robinson!" laughed Dolly, with a sneer; "well, Fido, I would have chose a bigger! Ha, ha! why she's only twelve years old."

"Of that fact, I'm aweer," replied Fido; "but then, won't she grow older, and improve with age—like wine?"

"And if she did," pursued Dolly, "she's a born lady, and would never be ignited to you!"

"Ha!" said Fido, with his fat chuckle; "but love levels all distinctions. And if her parents should cut up rough, and won't give their consent to such a heligible investment for their daughter, why then," continued Fido, who had once had (as his master, the chemist and druggist, soon discovered) rather too great a partiality for the acted drama, "then I shall bear her away to some far distant clime, and there we'll build a harbour by some green wood, on the banks of some phillandering stream, and pass our days on love and watercresses. Dost like the picture?" He put this question, à la Claude Melnotte, with a floating remembrance of a descriptive speech in *The Lady of Lyons*.

"But Dolly was not to be led away by his dra-

matic powers; and speedily brought him back to the realities of common life. 'Oh! you ridiculous—little—fat man! why, you know you've promised to be welded to me, as soon as ever we'd got money enough to open a green-grocery; and, while I was to mind the shop, you were to go out to parties, and wait.'

"Wait! it's you are the party that'll have to wait," said the faithless Fido. "Though I have drawn pictures of fancy, in which I choose to put you for a figger, yet, you must remember, Miss Dot, that I haven't gone so far as to commit myself to a reg'lar engagement. Whether I chuses to marry you, or no, all depends upon circumstances over which I hav'nt any control. I refers to the feeling of the 'art; and since Harabellar has looked upon me, I've a soul above green-grocery and white berlines."

"Very well, Mr. Fido!" said Dolly, with her most bewitching pout, "you can do as you please. You can take up with your chit of a Harabellar, and leave me to my baker."

"Baker! bother the baker!" cried the fat youth, indignantly polishing at his lady's shoe.

"Yes, sir, the baker," said Dolly, pursuing her advantage; "what have been pertickler attentive to me, sir! pertickler attentive!" and Dolly flourished her duster in Fido's face, in a very flippant manner.

"Pertickler attentive has he!" echoed Fido, furiously polishing the shoe; "pertickler attentive; ha, ha!—my suspicions is realized. There was a crumminess about that baker, as led me to suspect that he was a trifling with my affections: but I'll give him a twist. Pertickler attentive! why, you've been with him now!" and Fido looked full into Dolly's face.

"In course I have!" replied that maiden. "He's just been giving in the half-quartens."

"I see it all!" said Fido: "he's been giving in something else besides the half-quartens. Why, there's a patch of flour by your mouth! what right has he to go leaving his mark on my property, eh?"

Now for the moral and sentimental:—

"All this Miss Fanny agreed to, but on one condition—that six months should elapse before the marriage. In vain did Sir Charles implore her to forego this resolve, for she was firm and not to be moved by entreaty or endearment. She would not have him to marry in haste, lest he should repent at leisure; and the trial-time of six months would sufficiently test the soundness of his affection, and give him full time to look into his heart and see whether his love proceeded from a deep, true feeling, or only from powerful fancy."

"So, Sir Charles was obliged to agree to this, and, taking a tender adieu of Fanny, he left Minerva House—with what different feelings to those with which he had entered it! His silly wager had been the turning point of his career; and the two last hours had taught him the salutary lesson, that there was still a something in life worth living for; and that, in place of that course of doing nothing, which he had been so wearisomely pursuing, there lay before him that far better course of duty and purpose, where he could run his race, and fight his fight, and strive for his crown of reward, with a dear one beside him to strengthen him in all his good resolves, to nerve him with the might of love, to support him in times of weakness, to cheer him with tenderest sympathy, and even to lay down her very life for him, if the forfeit of her existence could purchase his."

On the whole, Mr. Cuthbert Bede, B.A., is a very pleasant companion for the half-hour before dinner, and will no doubt receive as hearty a welcome from the younger branches in many a country house, as his great namesake met with from the *ennuïes* monks of Jervaulx when he came among them:—

"He went to the abbey of Gervas, a grey monk he ther bycom,

"Gret joye made alle the covent, tho he that abytt nom."

We shall rejoice to welcome Mr. Cuthbert Bede when he next "nimeth" the "abytt" of Mr. Merryman.

## PUBLICATIONS RECEIVED.

*Lectures on Roman Husbandry, delivered before the University of Oxford, &c.* By Charles Daubeny, M.D., F.R.S., Professor of Botany and Rural Economy in the University of Oxford. J. H. and J. Parker.

*Rome: its Ruler and its Institutions.* By John Francis Maguire, M.P. Longman and Co.

*Virginia Illustrated, containing a Visit to the Virginian Canaan, and the Adventures of Port Crayon and his Cousins.* Sampson Low, Son, and Co.

*Nearer and Dearer. A Tale out of School.* By Cuthbert Bede, B.A. Bentley.

*Quits. A Novel.* By the Baroness Tautphœus. Three Vols. Bentley.

*Emmeline Latimer. A Novel.* By Sarah Symonds. Three Vols. Newby.

*St. Eustace; or The Hundred-and-One. A Novel.* By Vane Iretton St. John. Three Vols. Newby.

*Leonilda. A Roman Romance of the Sixteenth Century.* By Felix Meldred. J. Mitchell.

*The Eclogues of Virgil.* Translated into English Verse line for line. By the Rev. George Mackie, D.D. Dublin: E. J. Milliken.

*Select Fables of La Fontaine, with English Notes.* By Ferdinand E. A. Gase, M.A. Whittaker and Co.

*On the Medical Estimate of Life for Life Assurance.* By Stephen H. Ward, M.D. Churchill.

*Deafness; its Causes and Cure.* By Richard Heath, Esq., Surgeon. Wyand and Son.

In the celebrated History of the Council of Trent, by Father Paolo Sarpi, many passages are written in such a strain that it is impossible to discover whether the author is not turning into ridicule the events which he professes to be gravely narrating. In fact, the good father has been often roundly accused of being a heretic in disguise. If one were not acquainted with the personal history of Mr. John Francis Maguire, the honourable member for Dungarvan, his book on the ruler and the institutions of Rome might in like manner puzzle some readers. We have no doubt about Paolo Sarpi being a good Catholic, but he was a man who had not subjected all his reason and common sense to the authority of fellow mortals, and, in his own quiet and effective way, he makes the reader of his history see the crimes and follies, as well as the good acts and consultations, of the Tridentine Council. Mr. Maguire, while perfectly innocent of the delicate irony of the Italian historian, has introduced so many passages broadly comic into his book, that he almost seems to be turning his whole subject into ridicule. It may be as well, therefore, to testify that Mr. Maguire is a devout and pious son of the Church, and that the most amusing portions of his book are intended to be received with the utmost gravity. His object is to show that much ignorance and misapprehension prevail in England as to the social and political as well as spiritual condition of the Roman States. With the view of enlightening the British public on these points, he describes what he witnessed during a brief visit to Rome. A spirit newly translated from purgatory to heaven could not speak with more unbounded and unqualified rapture of all around, than Mr. Maguire does of the Roman ruler and institutions. He expatiates on "the rapt piety, the devout abstraction, the beautiful expression of holiness, which irradiates the face of the sovereign pontiff as with beams of celestial light." He tells stories of his stopping little children in the streets, and giving them *scudi* and his blessing, and narrates many circumstances to the credit of the worthy father, whose obese and good-natured countenance forms the frontispiece of the volume. The prisons, too, about which such atrocious calumnies are promulgated, are comfortable and well-ordered institutions. In the political prison, "instead of gloom, and horror, and noisome dungeons," says Mr. Maguire, "I beheld a large, well-lighted, well-ventilated, and, could such a word be properly applied to any place of confinement, cheerful-looking hall. The bright sun streamed in through several windows, placed rather high from the ground on one side of this vast hall; and on the other side, and facing the light, the cells were constructed, row above row, their doors and windows opening into this large enclosure." All this ought to be very comfortable, if the prisoners had committed any offence to justify their "confinement." The heggars of Rome are famous for their numbers and their troublesome importunity, which



our Irish reporter thinks highly commendable. "The Italian Catholic does not feel any hesitation in making known his wants to his neighbour, to his fellow man, or in asking for his assistance." That is certainly true. The facilities for getting rid of stray children are also praised, and there is no temptation in Rome as in England to infanticide. Whether, on the other hand, there is less inducement to vice is not taken into account. Everything in Rome, in short, is viewed as the perfection of earthly wisdom and happiness; and, probably, Mr. Maguire would bring as bright a report from Naples, whose monarch is spoken of as "the most delicate of hosts," when Pius the Ninth found refuge in his dominions. Of the various schools, colleges, and institutions of Rome, some interesting notices are given, but the book would be of more value if its tone were not throughout of such indiscriminate eulogy. The worst feature in it is the constant disparagement and abuse of Protestant England. All the social evils that are found amongst us are set forth in detail, with appendices, giving statistical proofs of the inferiority of England to the Roman States. The state of education in the large towns, the treatment of lunatics in Scotland, torture in India, cases of starvation and of infanticide, and other social crimes and evils, are exultingly proclaimed, while the "admirable administration of the Roman States" is presented in favourable contrast. No gleam of patriotism or of loyalty appears in the book, but all the author's aim is to disparage his own country, and to hold up that of the Pope to admiration and wonder. And this is the book of a member of the British legislature, and a nominal subject of Queen Victoria! Such was not the spirit of Catholics of the old school, whose loyal patriotism was not overborne, as that of Mr. Maguire is, by ultramontane treachery and subservience.

The Fables of Fontaine have always been a favourite class-book in French education, and justly so, as the matter is in itself interesting, and the style abounds in colloquial idioms and familiar expressions, not occurring in more formal works. At the same time La Fontaine is on this account often a difficult author for young pupils, and requires the aid of frequent annotations and explanations. M. Ferdinand Gasc, the French Master at Brighton College, has prepared a volume of select fables of La Fontaine, with English notes, especially adapted for the use of schools and the young. Great care seems to have been taken, not only in the preparation of the notes, but in attending to the accuracy of the text, which is often very incorrect in the editions commonly used in schools. The selection comprises a hundred and twenty of the best of La Fontaine's numerous fables. It is a volume which we can highly recommend as a French class-book.

Mr. Ward's treatise on the Medical Estimate of Life for Life Assurance, while forming a most valuable guide for professional men in their duties connected with these associations, contains many useful hints to the general reader on matters affecting health and longevity. Of the various degrees of security and insecurity of life incident to particular professions, callings, and trades, and the special diseases to which each class of persons is most liable, the work treats in a popular yet scientific manner. The results of the best statistical inquiries are presented in a comprehensive summary, and practical conclusions drawn, by which medical referees may be guided in delivering an opinion on any life. The remarks on temperament and personal peculiarities, as also on habits and usages, apart from the ordinary employment or occupation of individuals, are sensible and judicious.

Aural surgery has generally been left in the hands of empirics, few regularly educated surgeons devoting to the subject the time and attention necessary to obtain sufficient experience in this class of maladies. In the hospitals it has been very rare to find any special course of lectures or scientific instruction on the ear and its diseases. Some improvement has of late taken place in this branch of medical and surgical practice; and in London and other densely populated districts there is room for

the division of labour which can secure due attention to this particular branch of the healing art. Mr. Yearsley and other practitioners have done much to establish better modes of treatment, founded on anatomical and physiological science, as well as empiric experience, and there are now several aurists in whom public confidence can be placed. Mr. Heath, author of a Practical Treatise on Deafness, its Causes and Cure, was long associated with Mr. Wright, one of the ablest and most experienced practitioners, among whose patients was the late Duke of Wellington. Some remarkable cases are given in Mr. Heath's book.

#### Miscellaneous, Pamphlets, &c.

*Address to the Members of the Tyneside Naturalists' Field Club.* By John Hogg, Esq., M.A., F.R.S., President. Printed for the Author.

*The Mutiny in the Bengal Army.* John Chapman. *Letters on the Isthmus of Darien Ship Canal, with Commander Prevost's Report, &c.* E. Wilson.

*The First Steps in Irish Liberty.* By Charles Boggs. Dublin: J. O'Daly.

*The Present Crisis in India. Reflections by the Author of 'Our North-West Frontier.'* John Chapman.

FROM the annual address from the President to the Members of the Tyneside Naturalists' Field Club, we are glad to learn that this scientific Society continues with spirit its agreeable operations, and sets an example worthy of being imitated in other districts. Mr. Hogg, in his address, gives a summary of the proceedings during the year, recalling the pleasant recollections of the excursions and social gatherings, as well as the more formal meetings of the club, which are held in the rooms of the Literary and Philosophical Society of Newcastle. The excursions are made to all points of interest in the district of the Tyneside. One of them, on the 28th of August last year, was to Lindisfarne, or Holy Island, a place full of interest to the historian and antiquary as well as the naturalist. The members seem to include men of all pursuits and tastes, and the Tyne district presents a wide range for the field study of geology, zoology, botany, and every branch of natural history. In one part of Mr. Hogg's address he adduces some curious statistics, illustrative of the extension of railways, not at first appearing to bear much on the subject in hand. The increase of agricultural cultivation is not friendly to the botanist, but he has compensation in the railways which are spreading over the country. Up to last June there were 8506 miles opened, and allowing twelve acres to a railway mile on the average, the enormous space is taken up of 102,072 acres. A large part of this is waste ground at the sides and embankments of the lines, which will allow of the natural sowing, growth, and increase of many rare species. The farmer might think this rather a selfish kind of calculation, but the naturalist's ingenuity in thinking of it is amusing. Newcastle has long held a high place as a school of natural history, and recently it has also become a place of medical education. These two departments of study ought to be mutually benefited by the alliance of the Newcastle Medical and Scientific Institutions. All medical men, and especially those likely to be in the public service, ought to be acquainted, to a certain extent, with natural history, and we hope to find that the Tyneside Club will diffuse a taste for their pursuits among the students of the Newcastle School of Medicine.

While each mail brings tidings of the progress of the mutiny of the Bengal army, old Indians at home are contributing their pamphlets and letters on the causes of an outbreak so unexpected and formidable. Amidst the surprise and horror caused by the atrocious cruelties attending some of the insurrections, it is not likely that much heed will be paid to those who offer remarks in explanation of the conduct of the sepoys. This is done, however, by the writer of a pamphlet on the mutiny, who, after twenty-five years' retirement from Bengal, retains a warm remembrance of the good qualities of the native troops. He tells of their bravery, their sobriety, their loyalty, and their soldierly qualities, while all former mutinies and outbreaks have been caused by some real or

imagined grievance. The religious fanaticism of the present revolt will account for the atrocities, parallels to which we can only find in the "most Christian" court of the holy Inquisition. The writer thinks it impossible to dispense with a native army, and urges, as the chief precautionary steps in its reorganization, the admixture of races, the enlisting of all troops for general service, the restoration of greater authority to commanding officers, with other changes, the necessity for which has been made obvious by the present calamities. The pamphlet contains statements not always concurring with common opinion at this time, and on that account it is the more worthy of attention.

Recent letters from New York state that the U.S. ship of war, *Arctic*, is commissioned to make a survey of the Atrato and Darien ship canal routes. Some time ago the Emperor of France offered his co-operation with England and the United States in making a thorough survey of the whole isthmus. If the British Government has not been prompt enough in acceding to this proposal, to others will belong the chief honour and advantages of the scheme being carried. The United States Congress last year voted 25,000 dollars for the survey, which it seems is now to be executed. A collection of documents illustrative of previous surveys has just been published, including Commander Prevost's (H.M.S. *Virago*) report, 1853-1854, reprinted from the *Journal of the Royal Geographical Society for 1855*, Letters of Commander Parsons, of H.M. Surveying Ship *Scorpion*, and of Dr. Cullen, and a report of the exploration of the Darien, by Dr. H. C. Caldwell, Surgeon of the U.S. Ship *Independence*. A map and section of the route accompanies the treatise.

The first step to liberty in Ireland, according to Charles Beggs, is "really to know what we want;" the second step is "to ascertain and to know our friends from our foes;" and the third is "to organize our friends in one lawful and fraternal combination." It would be difficult to state, after perusing the tract, what Mr. Beggs really wants, but in one word he is anxious for "a row." He wants the Sassenachs and their "low minions" driven out of the emerald island, rent abolished, and a general division of land and property amongst the true Irish. In opposition to these and other laudable projects, he counts as his foes "the traitor press," the Government, aristocrats, Catholic as well as Protestant, and the peaceable and industrious population who work for the dir-ty money of the tyrants who hold the soil. His friends of freedom include all who are ready for a scramble, all who dislike paying rent, and Irish democrats generally. These he calls to combine in small and compact local societies, a renewal, in fact, of the ribbon conspiracies, with their secret unions and inevitable murders and crimes. Mr. Beggs exults in the present troubles of Great Britain, whose doom he thinks is fixed, as the country is hastening to decay, except an invasion by Louis Napoleon bring about a more speedy catastrophe. Then will be the time for Ireland to take revenge for her wrongs and oppression at the hands of the "base, brutal, and bloody" Saxon. One single sentence will show the style of this small Cati-line—"The demon dastard heart of trembling tyranny will ultimately break beneath the eternal and terrible frowns of an organized democracy, and at the instance of its supreme will, like an angel, by some mystic incantation arising from the desolate and dreary moor, the mountain nymph, 'sweet Liberty,' suddenly springs from the hiernal (Hibernian) solitudes of slavery, and in the genial lights which flash from her refulgent wand we behold the standard of freedom unfurled, a trampled nation uprisen, and a captive nation freed." There are sixty pages of bombast like this, in a pamphlet which deserves the consideration of Dr. Conolly rather than of the critics.

The author of a pamphlet on 'Our North-West Frontier,' which attracted some notice when it was published, has offered his opinions on the Present Crisis in India. With all the writer's views few will agree; as he begins, for instance, with a dis-

quisition on the impolicy and folly of the late Persian war. The most acceptable portion of the pamphlet is that which consists of extracts from the writings of men of high Indian name and experience, relating to the condition of the Indian army, especially of General Jacob, of whose work on the Bengal army, published in 1851, a new edition has lately appeared. In fact, the bulk of the pamphlet is a reprint of General Jacob's important statements and valuable suggestions. General Jacob is an officer from whom much may yet be expected in the annals of India.

#### List of New Books.

Birch's (J.) Positive Theology, post 8vo, cloth, 6s.  
Bridges' (F.) Phenology, folsap 8vo, boards, 3s. 6d.  
Brown's Analytical Exposition of Epistle to Hebrews, 8vo, cl., 14s.  
Cavil's (T.) Works; Essay, vol. 2, post 8vo, cloth, 6s.  
Collins (J. R.) Short French Grammar, 12mo, cloth, 3s. 6d.  
De Quincey's Works, vol. 6, post 8vo, cloth, 7s. 6d.  
Dumas' Vicomte de Bragelonne, vol. 1, 12mo, boards, 7s. 6d.  
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#### ARTICLES AND COMMUNICATIONS.

##### AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

Montreal, Canada, August 14, 1857.

You will be able to understand the spirit in which the inhabitants of this city regard the scientific convention now assembled, when I inform you that the local papers are unanimous in declaring the meeting "the most important and interesting event that has ever occurred in Canada." The city has raised a subscription of more than 1200*l.*, and all, or nearly all, the naturalists are quartered with private families. The meetings are held in the Court House, a magnificent structure just completed, which, like most of the public buildings here, would do credit to any European city of the first order. The meetings commenced the day before yesterday, at 10 A.M.

The Local and Standing Committees assembled at half-past nine, and shortly after his Excellency, Sir W. Eyre, K.C.B., Administrator of the Government and Commander of the Forces, attended by his staff, arrived, and proceeded to the rooms of the Local Committee. There the members of that committee and the officers of the Association had the honour of being presented to his Excellency. His Excellency was attended by Mr. Pennefather, Governor's Secretary; Lieut.-Col. Thackwell, Military Secretary; Lieut.-Col. the Hon. R. Rollo, Assist. Adj.-Gen.; Lieut.-Col. Holsworth, Dep. Qtrm.-Gen.; Lieut.-Col. Irvine, Prov. A.D.C.; and Major Robertson, A.D.C. He wore his undress uniform, with the star of Knight Commander of the Bath, and his collar and decoration as Commander of the Legion of Honour. Proceeding to the Circuit Court Room, where the general meeting was held, he took his seat upon the bench, having the Anglican Lord Bishop of Montreal on his left, the retiring President of the Association (Professor Hall, of Albany) and the President of the Local Committee (Sir W. E. Logan) on his right. The room was crowded with a large and fashionable audience, a large number of ladies gracing the occasion with their presence.

Among the notables present were the Hon. R. Spence, P.M. General; Hon. Attorney-General Cartier, Hon. Mr. Justice Day, Hon. Mr.

Justice Mondelet, Mr. Justice McCord, and Mr. Justice Bruneau; Hon. Peter McGill, Hon. Col. Moffatt, Hon. W. B. Robinson, M.P.P.; Mr. Holton, M.P.P.; Mr. Lorange, M.P.P.; Mr. Papin, M.P.P.; Mr. Morin, M.P.P.; Lieut.-Col. Munro, 39th regiment; Lieut.-Col. Orde, R.E.; Hon. P. J. O. Chauveau, Superintendent of Education for Lower Canada; Rev. Dr. Ryerson, Superintendent of Education for Upper Canada; and among the members and guests of the Association, Professors Lovering, Dewey, Hare, Bache, Henry and Olmsted, from the U.S.; Prof. Dawson and Prof. Howe, McGill College; Prof. Hincks, Toronto; Dr. Berthold Seemann, Representative of the Linnean Society of London; Prof. Ramsay, of the British Geological Survey; Professor Kelland, Edinburgh; Mr. Woodall, Oxford University, and Professors Thompson and Miles, Bishops' College, Lennoxville.

Professor HALL of Albany introduced to the Convention the Vice-President for the year, Professor Caswell, who stated that the proceedings would be commenced by a prayer by the Right Rev. the Lord Bishop of Montreal.

Professor CASWELL then addressed the Convention.—He said: Gentlemen of this Association, I have to congratulate you on the attendance of so large a number of members at the opening of this year's eleventh annual meeting. It augurs well for the interests of science that so many have come to this gathering to place their choicest contributions on her altar, and to welcome to her fellowship the humblest labourer in her cause. I think, also, that it is a matter of congratulation that we are met without the limits of the United States. However it may have been in former times, it is not now the case that mountains or seas interposed make enemies of nations. In the onward march of science, it is one of the felicities of our time that little account is taken of the boundaries that separate states and kingdoms. The discoverer of a new law or principle in nature, of a new process in the arts, or a new instrument of research of beneficial tendency, is speedily heralded over land and ocean, is welcomed as the benefactor of his race, and is immediately put into communication with the whole civilized world. We have before us a practical illustration of the amenities of science. We of the United States are here convened on British soil, little thinking that we have passed the boundary of the protection of American law, or that amidst the generous hospitality of this enterprising commercial capital of a noble Province of Great Britain we are aliens to the British constitution. We have left the American eagle, but we assure the gentlemen of Canada that we feel in no danger of being harmed by the British lion. I have said that we are aliens to the British constitution; but that must of course be taken in the narrowest and most technical sense, for I am proud to say, on deliberate conviction, that nothing is alien to the British constitution that looks to the perfection of knowledge, to the furtherance of the arts, or the amelioration of the condition of humanity. I further say, and (turning to Gen. Eyre) I here speak by permission, that the proudest achievements of British arms, and they have been proud enough for the highest desires of ambition or of glory, have been less glorious than that patronage of science, that success in the arts, and those attempts to improve the condition of our race, which have placed Old England in the van of nations. At no period of time has that patronage been more wisely directed or those noble efforts more earnestly persevered in than under the reign of the present illustrious Queen, whose virtues are alike the ornament of her sex and crown. There is something of special fitness in our assembling here at this time—at a moment when England and America are shaking hands with each other across the broad bosom of the Atlantic, when that electric chain which is to bind them in perpetual friendship is being placed securely in the depths of the ocean, far out of reach of any temporary storms which might impair its repose or lessen its efficiency. But our congratulations are not unmixed with sad-

ness. It is a melancholy event which has called me to preside at this time. You last year elected to your Presidency a gentleman distinguished for amenity of manners, philosophical research, and laborious diligence in the cause of science. That gentleman is no longer among the living. Jacob Whitney Bailey died on the 26th February, in the 46th year of his age. I hope that before the close of this meeting a fitting tribute will be paid to his memory and services in scientific research. I will only say now that he was born in Massachusetts in 1810; but spent the greatest part of his youth in Providence, which is the place I represent here. He early gave indications of that love of study and research which afterwards distinguished him. At a period when most boys are engrossed with the sports and occupations of their age, he was sedulously employed in making collections in natural history, and in the examination of their properties and scientific classifications. He afterwards graduated at West Point, and though not of a strong constitution, passed with credit through the arduous duties of that institution, and ended his studies as fifth in a class of forty-five. He left in 1832. In 1834 he was recalled to give instructions in chemistry, geology, and mineralogy, and in 1838 he had his full appointment to that department. The official order announcing his death stated that for more than eighteen years he had held that chair with ability and success; and it further stated, and stated truly, that distinguished for his attainments in science, his loss would be felt not only there, but by the friends of science throughout the world. All the friends of science acquainted with his labours will concur in this tribute to his memory. In his private life Prof. Bailey was exceedingly retiring, listening to the opinion of others, but reluctant to attract attention to his own. In the midst of domestic endearments, he was called to suffer a bitter sorrow and bereavement. In 1852, almost within sight of his own dwelling, his wife and daughter perished from the burning of a steamboat. He never fully recovered from the shock of that heart-rending event. In sorrow so profound, he found relief of spirit in the precious blessings of the gospel. The crowning excellency of his character was, that to the severe inductions of philosophy he added the humble faith of a Christian. Such was the man whom friendship and science deplore. In presiding over you, I must ask your indulgence and co-operation. We are met to advance the cause of science, and to encourage each other, and to promote the great interests of humanity; for science must always be held tributary to that higher interest—the interest of the human race.

Sir WM. LOGAN said:—The first duty devolving upon me is, on behalf of the Local Committee and the citizens, to bid the Association a hearty welcome in Montreal. The welcome which I could give could only be a welcome to Montreal; but His Excellency, the head of the government, recognising the importance of this meeting, and the interest attached to it, has kindly undertaken to give you a welcome, which will not be merely on the part of the citizens of Montreal, but on the part of the whole of Canada; and not merely of the whole of Canada, but on that of all the British North American possessions. I shall therefore leave it to His Excellency to give you that welcome.

His Excellency the Administrator of the Government rose amidst applause, and said:—Ladies and Gentlemen,—It is not my desire or intention to detain you more than a few moments, as I have no doubt you will be anxious to commence the business of the meeting. But I wish to express, on behalf of Canada and myself, a warm and cordial welcome to all those who have honoured us with their presence upon this occasion. It is a gratification to see so many of the citizens of the United States amongst us. Time has been when so large an influx from the other side of the frontier might have awakened other feelings, not, possibly, unmixed with some degree of apprehension. But, thank God, those feelings have passed away, and



we can now unite in one common purpose, whether for the advancement of commerce or the promotion of science, feeling no other rivalry than that of a generous emulation. We have many of us enjoyed the hospitality of our neighbours on the other side. It is not for us to praise ourselves, but I trust that that virtue is not deficient on this side of the national frontier. Thanks to the benefactors of mankind, and the cultivators and promoters of science, we have ample means of conveying our thoughts and persons without much difficulty; and when that stupendous structure is completed which is striding across the river, and bids fair soon to afford the means of connexion with both sides, I trust our communication will then be complete. I cannot conclude without expressing my regret at the absence of Professor Bailey, who had established for himself a European reputation, and whose presidency upon this occasion so many looked forward to with great pleasure. While we bow to that dispensation which has deprived us of his services upon this interesting occasion, I think we have in Professor Caswell a very worthy successor.

The PRESIDENT said he had much pleasure in introducing to the Association Professor Ramsay, who was here as the delegate from the Geological Society of Great Britain.

Professor RAMSAY said it gave him great pleasure to find himself on this side of the Atlantic among his scientific friends. He had no idea of coming, having made arrangements to go to the top of Mont Blanc, where he expected to derive the greatest possible pleasure; but being appointed to represent the Society at this Association, he gave up that excursion, as he anticipated ten times more pleasure and ten times more instruction by coming to this meeting of the American Association.

The PRESIDENT said he had the pleasure of introducing Dr. Berthold Seemann as the delegate of the Linnean Society of London.

Dr. SEEMANN expressed the great pleasure he had in being present, as well as in bearing testimony to the high esteem which the Society he represented had always entertained for the American Association. The Linnean Society had always taken a deep interest in that Association, and he had no doubt that this meeting would add another chapter to the proud history of American science. He begged to offer them the most sincere congratulations of the Linnean Society of London.

Dr. STEINER, of Baltimore, said at the last meeting he had the honour of inviting the Association to hold its present meeting in Baltimore, but owing to the great inducements held out by their friends on this side of the line, the Association accepted the invitation to this city. The same Institute which he then had the honour of representing had renewed that invitation. There was another gentleman beside him who would present an invitation from another Society in Baltimore (the Maryland Historical Society). These Societies extend their invitation to the Association to hold their meeting at Baltimore next year. He need only say that the courtesies of Baltimore would be extended to the Association, should they accede to the invitation.

Professor BACHE, representative of the Maryland Institute, said that that Institute waived its claims last year in favour of Montreal. They now renewed their invitation to the Association to meet at Baltimore next year. He would therefore propose that both invitations be referred to the Standing Committee.

Prof. DAWSON, President of the Natural History Society of Montreal, said—In behalf of the Natural History Society of Montreal, he would say that they most heartily rejoiced to see so large a representation of American science as that now present; and they hoped that this meeting would be a successful one—one which will give a strong and healthy stimulus to the pursuit of natural history in this city and in Canada. If so, the Natural History Society will regard this as the greatest service which the Association has done to the cause of American science.

After some routine business had been transacted, the meeting adjourned.

In the afternoon meeting the Vice-President announced that the Committee had divided the Association into two Sections, A and B.

The first of these Sections would take cognizance of Mathematics, Astronomy, &c.; and the second of Chemistry, Geology, Natural History, &c.

The Committee had also determined that Section B should be at liberty to form a sub-section for ethnology, statistics, and political economy, so soon as ten papers should be registered upon those subjects.

The two sections were then organized. Of Section B Professor Dana was named President; and of Section A Professor Bache was elected President, and Professor Rogers Secretary *pro tem*.

The entertainments promised are a *Conversazione* of the Natural History Society of Montreal, and Prof. Hall's retiring Address; an excursion to St. Helen's Island; a *Conversazione* at McGill College; and a farewell entertainment by the Mayor and Corporation. Excursions to the Falls of Niagara and other places, after the conclusion of the meetings, are also spoken of.

#### BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE.

THE meetings of the British Association vary so considerably in numbers, according to the populousness and facility of access of the city in which they are held, and the choice of locality is in consequence of such material importance to its finances, that many will be surprised to learn that a period of no less than two-and-twenty years has elapsed since the philosophers of Great Britain assembled together in the metropolis of Ireland. Dublin has taken so distinguished a part in the advancement of science, and is so well provided with the accommodation, amid her own Professors, for holding such meetings, that the Association ought not to be absent from her halls and colleges for a longer period at any time than ten years, and we rejoice that the present gathering has commenced with auspices of material success. The registered members who assembled in the Rotunda on Wednesday evening, to hear the President's Address, were nearly double the number that met on the same occasion last year at Cheltenham, and though not so numerous as at the meeting of the year before in Glasgow, the number has far exceeded that of the Liverpool meeting. They were—

Liverpool	...	...	...	1278
Glasgow	...	...	...	1749
Cheltenham	...	...	...	805
Dublin	...	...	...	1573

A comparison of the numbers announced on the first evening of the meetings at Liverpool, Glasgow, and Dublin, shows that the difference rests mainly with Associates.

Members.	Liverpool.	Glasgow.	Dublin.
Old Life	218	144	175
New Life	12	18	12
Old Annual	80	118	125
New Annual	79	88	90
Associates	521	914	705
Ladies	362	454	454
Foreigners	6	13	12

1278      1749      1573

The business of the Association commenced, as usual, with a meeting, on Wednesday, at 3 o'clock, of the General Committee, Dr. Daubeny, the retiring President, in the chair. The proceedings consisted of the reading of the Report of the Council, the Report of the Kew Committee, the Report of the Parliamentary Committee, and the General Treasurer's Account, and concluded with the election of Sectional Officers.

#### Report of the Council.

1. With reference to the subjects referred to the Council by the General Committee, at Cheltenham, the Council have to report as follows:—

I. The General Committee directed that copies of the two last Reports of the Parliamentary Committee should be transmitted to each member of

the General Committee, with a request that opinions might be expressed on the important subject—"Whether any measures could be adopted by the Government or Parliament that would improve the position of science and its cultivators;" and that such opinions should be forwarded, for the consideration of the Council, before the 20th of September, 1856. This direction having been complied with, and a considerable number of letters expressing the opinions of individual members of the General Committee having been received, the Council requested the Assistant General Secretary to prepare a digest, and to make such an arrangement of the communications themselves as might best facilitate their full consideration at a special meeting of the Council in January, 1857. At this meeting Lord Wrottesley, President of the Royal Society, being one of the Members of the Council of the Association, communicated for the information of the Council certain resolutions, which have been adopted by the President and Council of the Royal Society, bearing on the same question, and after a full consideration of these resolutions, and of the opinions expressed in the letters of the individual Members of the General Committee of the Association, the Council adopted the following minute—viz., "That the Council concur generally in the course of proceeding which has been taken on this subject by the Royal Society as now explained to them by the President of that Society." This minute was communicated by order of the Royal Society, and the resolutions have been since transmitted by Lord Wrottesley to Lord Palmerston, as having been adopted by the President and Council of the Royal Society, and concurred in by the Council of the British Association.

2. The recommendation that "the application to government for an expedition to complete our knowledge of the tides be renewed," was referred by the Council to the Committee of 1851, by whom the previous application had been made. The Committee consists of the Rev. Dr. Whewell, the Earl of Rosse, Sir John Herschel, and the Astronomer Royal. No report has yet been received by the Council of the Committee's consequent proceedings.

3. The recommendation that "the application made to government in 1852 concerning the great southern telescope be renewed," was communicated by the Council to the President and Council of the Royal Society, by whom the steps were taken in 1852 to promote this important object, and a hope was expressed on the part of the Association that the President and the Council of the Royal Society would renew their efforts to carry out an object of so much interest to astronomy. The Council have not been informed of any subsequent proceedings.

4. The General Committee having directed that "a memorial should be presented to the Admiralty praying for the publication, in a simple, uniform, and complete shape, tabular and descriptive, of the results of the trials of Her Majesty's ships in the public service," the Council referred to the President of the section of Mechanical Science, with whom the request for this publication had originated, for the information required to enable the Council to proceed in drawing up the desired memorial. The information was supplied, and a document drawn up in more limited terms than the recommendation, and stating fully the dates required, and the purpose to which it was proposed to apply them, was transmitted to the Secretary of the Admiralty, who replied that the Lord Commissioners did not think it would be proper for them to give information in regard to vessels belonging to private companies. This reply was communicated to the President of the Mechanical Section and a committee acting with him on the registration of ships' tonnage, by whom the subject will be again brought under the consideration of this meeting.

5. The deputation appointed to wait on Her Majesty's Secretary for Foreign Affairs, to "urge the desirableness of sending out an annual expedition to the Niger, as proposed by Dr. Baikie," have informed the Council that they have had an interview with Lord Clarendon, and have presented a memorial, which was very favourably received,



and that the expedition has since been appointed, and has proceeded to the Niger under Dr. Baikie's direction.

II. At the Glasgow meeting of the British Association a Committee was appointed by the General Committee, to consider a proposition which had been submitted to them for making a catalogue of the philosophical papers contained in the various scientific transactions and journals of all countries. The Report of this Committee was made at the Cheltenham meeting, and was communicated by direction of the Council to the President and Council of the Royal Society, whose co-operation in this important undertaking was requested. The original Committee appointed by the Association, with the addition of two members named by the Council of the Royal Society, were requested to give the subject a second and more full consideration. Their Report was presented to the Council of the Royal Society in June last, and was ordered to be printed, and 250 copies to be sent to the British Association for distribution amongst the members of the General Committee at the Dublin meeting, with a view to obtain the thorough concurrence and co-operation of the two Societies in the plan which shall be ultimately adopted for carrying out a work which promises to be of very considerable advantage to the cultivators of science in all countries.

III. The Council congratulate the General Committee on the publication, which has taken place in the past year, of the meteorological observations made by the officers of the Irish Trigonometrical Survey at Mountjoy Barracks, near Dublin. It will be remembered that at the Southampton meeting of the Association in the year 1846, a committee was appointed to communicate with the Master-General of the Ordnance relative to the publication of these valuable observations, and that in January, 1847, the Marquis of Anglesey, then holding the office of Master-General of the Ordnance, expressed to the Committee his readiness to meet the wishes of the British Association, if the Treasury could be induced to grant the necessary funds, for which the Ordnance had not and could not make any provision. In consequence of this communication the Council appointed a deputation to solicit from the Treasury that a grant for the purpose should be placed at the disposal of the Master-General, and were informed in reply, through the Secretary of the Ordnance, under date May 31, 1847, that the Treasury would be prepared to include the expense of the publication in the estimate to be laid before Parliament in 1848. The Council were also favoured with a letter from the Marquis of Anglesey, dated July 10, 1848, stating that "he had directed the publication of the Mountjoy observations to be carried into effect with as little delay as possible." The publication having now taken place, it has appeared to the Council desirable that the part taken by the British Association in recommending and in procuring the funds for this valuable contribution to the meteorology of the British islands should be thus fully stated, because it has happened, no doubt accidentally, that no notice of any of these circumstances appear in the preface or in the introduction of the publication itself.

IV. The Council have been informed that circumstances will deprive the Dublin meeting of the attendance of Edward C. Cooper, Esq., who was named as one of the Vice-Presidents for the meeting, and with the concurrence of the Local Committee in Dublin, they recommend to the General Committee that the name of the Lord Chancellor of Ireland should be substituted for that of Mr. Cooper.

V. The Council have received letters of invitation to the Association to hold its meeting in 1858 in Manchester; from the general purposes of the City Council; the board of directors of the Athenæum; the Literary and Philosophical Society of Manchester; the Botanical and Horticultural Society; the Natural History Society; the Photographic Society; the Principal and Professors of Owens' College.

VI. The Council have this day received letters of invitation to the Association to hold its meeting in

1858 in Leeds, from the Mechanics' Institution and Literary Society; the School of Practical Art.

VII. The Council have also this day received letters of invitation from the Literary and Philosophical Society of Newcastle-on-Tyne, and the Fine Arts Society of the North of England, to hold an early meeting at Newcastle.

VIII. The General Committee will receive full information in the subjoined report from the Kew Committee of the proceedings of that establishment during the past year, and the Council are persuaded that the General Committee will see with pleasure the evidence of the still increasing public utility of that institution, and of the credit thereby accruing to the British Association.

#### Report of the Kew Committee.

Since the last meeting of the British Association, the works necessary for lighting the Observatory with gas have been executed at a cost of 250*l.*, which has been defrayed by a grant from the Wollaston Fund by the President and Council of the Royal Society.

Soon after the last meeting of the Association, the Board of Works commenced the external repairs of the Observatory. These were completed in November last. The Chairman having represented to the Chief Commissioner of Works the necessity for considerable repairs to the interior of the building, the Board of Works agreed to execute such repairs as soon as the necessary funds should be voted by Parliament. The Committee understand that the requisite vote has been passed, and that the works will be proceeded with in the course of the present summer.

The following memorandum relative to the re-establishment of self-recording magnetic instruments at the Kew Observatory was submitted to the Committee by General Sabine on July 22, 1856.

"1. The decennial period in the solar magnetic variations, and its coincidence with a similar period in the frequency and amount of the solar spots, appear to be highly deserving of attention in an observatory established, as Kew is, for physical researches.

"2. There is reason to suppose that the permanency and regularity in the occurrence of the decennial period in the magnetic variations, and its coincidence with the periodic variation of the solar spots, might be effectually and satisfactorily tested by observations of both classes of phenomena at the alternate periods of maximum and minimum, say for example, in 1857 and 1858 as the anticipated period of maximum, and in 1863 and 1864 as the anticipated period of minimum, and so forth.

"3. The apparatus constructing under the superintendence of Mr. De la Rue will, it is hoped, fully meet the requirements of the research in respect to the solar spots.

"4. Since the time when the magnetic self-recording instruments belonging to the Kew Observatory were constructed under the direction of Mr. Ronalds, very considerable improvements have been made in the art of photography, and the six months' trial, which was made by Mr. Welsh of Mr. Ronalds' instruments, has led in several other respects to suggestions for improvements which could not but be expected to be required in instruments of so novel a kind, while at the same time the six months' trial referred to has placed beyond doubt the sufficiency of a properly conducted research by means of self-recording instruments for the examination of the solar magnetic variations."

The Committee authorized Mr. Welsh to proceed with the construction of the instruments, which have now been completed at an expense not exceeding 250*l.*, this sum being defrayed from the funds supplied by the Government grant through the Council of the Royal Society, the instruments remaining at Kew at the disposal of the Council of the Royal Society.

With the assistance of apparatus lent from General Sabine's department, the Observatory is now possessed of the means of determining with great accuracy the various constants required in magnetic observation. Some alterations in the method of manipulation have, it is believed, added

considerably to the accuracy of observation of the absolute value of the magnetic force.

At the request of the Foreign Office, magnetical and meteorological instruments have been prepared at the Observatory for Mr. Lyons M'Leod, Consul at Mozambique. Mr. M'Leod attended on several occasions in order to make himself acquainted with their manipulation.

The following correspondence has taken place relative to an application from the Austrian government to be supplied with magnetical instruments, to be employed in the scientific voyage undertaken by his Imperial Majesty's frigate *Novara*.

"Admiralty, 31st December, 1856.

"Dear General Sabine,—The Austrian Consul, Baron Rothschild, has written a pressing note to the Admiralty to ask where the enclosed list of instruments can be procured, and for any assistance we can give in ensuring their being the best. Will you be so good as to say what answer shall be sent? would it be too much to ask you to see that they are properly sent, and as nearly as you can will you name the time the instruments could be ready?

"Yours faithfully,  
(Signed) "JOHN WASHINGTON.

"Memorandum of Instruments required by His Imperial Majesty's Frigate *Novara*."

"a. The Azimuth Compass.

"b. The Unifilar Magnetometer.

"c. Mr. Fox's apparatus for observing the magnetic force and inclination.

"d. Mr. Barrow's Circle for observing the magnetic inclination.

To the apparatus *b* belongs also a peculiar apparatus for its erection and use on board ship.

"For the further use of these instruments and for taking the observations made thereby, it is desired that they may be delivered with the indication of their respective constants, as the moment of inertia, the temperature, coefficients, &c. &c.

"The Consulate-General will apply to the British Admiralty, who will, no doubt, kindly give the names of the makers who supply the British Admiralty, as it is desired that they be the same instruments as those on board Her Majesty's ships of war.

"London, 20th December, 1856.

"13, Ashley-place, London.

"January 7th, 1857.

"Sir,—I have received from Mr. James Yates a copy of the letter which you addressed to him on the 26th of last month, describing the scheme of the scientific voyage of circumnavigation about to be undertaken by His Imperial and Royal Majesty's Frigate *Novara*, and requesting to be furnished with any suggestions which may assist you in carrying out the objects for which this voyage has been undertaken. I have deemed, therefore, that it may be agreeable to you to be informed, that in consequence of an application from Baron Rothschild to the British Admiralty, I have been requested to undertake, and have undertaken, to prepare the following instruments named in Baron Rothschild's letter for the magnetical observations to be made during the voyage, viz.—

"1. A Standard Azimuth Compass for the Declination.

"2. A Barrow's Inclinator for the Inclination.

"3. A Fox's apparatus with Gymbal Stand for Inclination and Magnetic Force at sea.

"4. A Unifilar Magnetometer for observations of the Absolute Horizontal Magnetic Force on land.

"These instruments will be examined and their constants determined at the Kew Observatory of the British Association for the Advancement of Science, and will be ready by the end of February or beginning of March, together with instructions for the use of each of the instruments, and blank forms for the convenient record of the observations to be made with them. It is most desirable, however, that the physicist who is to be charged with the observations should have some previous practice with the instruments, and I would therefore beg leave to suggest that the gentleman who may be appointed to that duty should be directed to proceed in the first instance to London, so as to arrive there about the third week in February, and after

having made himself familiar with the use of the instruments, should take them with him to Gibraltar, and there await the arrival of the *Novara* on the passage from Trieste to Rio Janeiro. I have the honour to remain, Sir, your obedient servant,

(Signed) "EDWARD SABINE, Major-General.

"P.S.—Several of the instruments above mentioned will be ready by the end of the present month. Baron Rothschild's letter does not say anything about marine meteorological instruments. Should instruments of this description, such as are now furnished to the British Navy, be desired, they could be supplied by the Kew Observatory, and might accompany the magnetical instruments to Gibraltar.

"Dr. Karl Scherzer, Vienna."

The magnetical instruments for this expedition have been prepared, and the constants determined at the Observatory. Dr. Hochstätter, of Vienna, who has undertaken the superintendence of the magnetical observations to be made during the voyage, visited the Observatory in the end of February and beginning of March, to receive instructions in the use of the various instruments.

A letter has been received by General Sabine from the Archduke Ferdinand Maximilian, expressing his thanks, as Chief Officer of the Austrian Navy, for the assistance afforded to Dr. Hochstätter, who writes that he had commenced his observations:—Dr. Hochstätter's letter is dated Gibraltar, 21st May, 1857.

In consequence of an application from the Hydrographer of the Admiralty, Dr. Baikie and Lieutenant Glover, who have recently sailed on an expedition to Africa, were furnished with magnetical instruments, whose constants had been previously determined at the Observatory. Dr. Baikie and Lieut. Glover visited the Observatory, when detailed instructions were communicated to them by Mr. Welsh, as to the practical use of the instruments.

Application having been made to the Royal Society by Her Majesty's Secretary of State for the Colonies, relative to a supply of magnetical instruments for an expedition to British North America, under the direction of Mr. Palliser, Lieut. Blakiston, R.A., who accompanies the expedition, attended for some time at the Observatory for the purpose of manipulating with the magnetical instruments, which have been prepared under the direction of Mr. Welsh for the use of the expedition. The constants of these instruments were determined as in the other instances already referred to in this report.

At the request of the Council of the Royal Society, Mr. Welsh has prepared the magnetical instruments required in the North Polar Expedition, which has been fitted out at the expense of Lady Franklin: the cost of preparation of these instruments is defrayed by the Royal Society. The instruments themselves have been supplied from Major-General Sabine's establishment at Woolwich.

General Sabine having communicated to the Committee that 200l. had been placed at his disposal by the Admiralty, for the purpose of conducting the magnetic survey of Scotland, in connexion with the general magnetic survey of the British Islands, as recommended at the last meeting of the Association, the Committee have arranged that Mr. Welsh shall undertake such survey in the course of the present and following summer.

Sir James Clark Ross has already commenced the survey of England, taking Kew as his base station.

A new method, proposed by Dr. Lloyd, of determining the absolute total magnetic force by means of the Dip Circle, will be employed in this Survey. Dip Circles adapted for this method have been supplied to Sir James C. Ross and Mr. Welsh, also to Lieut. Blakiston for his survey in North America.

#### PHOTOHELIOGRAPH.

On the 20th of May, 1854, Benj. Oliveira, Esq., F.R.S., placed the sum of 50l. at the disposal of the Council of the Royal Society, to be appro-

riated during that year in any manner the Council might consider most in harmony with the interests of science. Mr. Oliveira further stated, that he might probably in future years offer a similar sum if the mode of its disposal appeared to him eligible; and an application having at the same time been made by the Kew Committee for the sum of 150l., in order to erect a photographic apparatus for registering the position of the spots in the sun's disc, as suggested by Sir John Herschel, the Council of the Royal Society devoted to this purpose the donation of Mr. Oliveira, and proposes, should it be continued, to apply it for the next two years in replacement of the sum of 100l. which the Council in the meantime advanced from the donation fund of the Royal Society, in order that the undertaking might not be delayed. This arrangement was approved by Mr. Oliveira, and the apparatus has, under the direction of Warren De la Rue, Esq., F.R.S., been completed by Mr. Ross, at the cost of about 180l.

The object glass of this instrument is 3 $\frac{1}{4}$  inches aperture and 50 inches focal length; it is not corrected for achromatism in the ordinary manner, but so as to produce a coincidence of the visual and photogenic foci. The secondary objectives for magnifying the image produced by the principal object-glass are of the Huyghenian form. They are three in number, producing respectively images of the sun 3, 4, and 8 inches in diameter. Between the two lenses of each of these secondary object-glasses, is inserted a diaphragm plate carrying the fixed micrometer wires, which are of platinum; these wires are four in number, two at right angles to the other two. One of the wires of each pair is in such a position that they may both be made tangential to the sun's image, while the other two cross at a point situated near the sun's centre. By means of these wires, the distance in arc between each pair having been once for all ascertained astronomically for each secondary object-glass, it will be easy to determine all the data necessary for ascertaining the relative magnitudes and positions of the sun's spots. These micrometer wires are under the influence of springs, so as to preserve a tension upon them when expanded by the sun's heat, and thus to keep them straight.

The principal and secondary object-glasses are not mounted in an ordinary cylindrical tube, but in a pyramidal trunk, square in section, 5 inches in the side at the upper end, which carries the principal object-glass, and 12 inches in the side at the lower end, which carries the photographic plate-holder and the usual ground glass screen for focusing.

This trunk is firmly supported by a declination axis of hard gun-metal 2 $\frac{1}{2}$  inches in diameter; it is furnished with a declination circle 10 inches in diameter, reading to one minute of arc, and has a clamp and screw motion for fine adjustment in declination.

The declination axis works in Y-bearings at the top of the polar axis, which is 12 inches long; it is 4 inches diameter at its upper end and 1 $\frac{1}{2}$  inch at its lower end. The lower end fits with a slight taper into a brass collar up to a shoulder, the friction being reduced by a steel spring plate pressing against a hardened steel hemisphere at the end of the axis.

It will be seen by the above description, that every precaution has been taken to secure stiffness in the telescope combined with freedom in the motion of the polar axis. The polar axis is driven by a clock driver, which answers perfectly, and is easy of regulation to the greatest nicety, so that the sun's limb remains for a long period in contact with the tangential wires. Near the lower end of the polar axis is fixed the hour-circle, which, like the declination circle, is 10 inches in diameter; it is graduated to read to 2 seconds of time. An endless screw, making about two revolutions in one minute, gears into the hour-circle and connects it with the clock. As it is generally necessary to make small corrections in right ascension after the tangent screw has been geared with the driving clock, in order to bring the sun's image in position with respect to the micrometer wires, a sliding

plate is provided which carries the bearings of the tangent screw; this is acted upon by a second fine screw parallel with the tangent screw, so that by rotating the second screw, the sliding plate and the tangent screw are moved through a small space, and the hour-circle thus caused to rotate to the extent necessary for bringing the sun's image in position.

The clock is driven by two weights, one pulling upwards over a pulley, the other downwards, thus suspending the barrel and equalizing the pull, and avoiding friction on its bearings. By causing the click of the winding lever to abut on the ratchet-wheel of the going part of the clock during the period of winding, the clock goes at its normal speed while it is being wound.

The mode of regulating the clock is extremely simple and efficacious; it is effected by approaching to, or withdrawing from, a hollow cone over a small wheel, on which are attached, by means of flat springs, two small weights, which expand by centrifugal force and come in contact with the inside of the hollow cone.

The polar axis of the telescope is carried by a dial-plate, which fits on the top of a hollow column of cast iron, the section of which is a parallelogram. This column is securely fastened to the stone foundation. The instrument is mounted within the rotating dome of the Kew Observatory, which has been repaired and put in order for that purpose. The photographic dark room is at present too distant from the telescope, but it is contemplated to construct one close to it, as serious inconvenience has been already experienced in the preliminary experiments in consequence thereof.

The telescope and its mechanical appliances may be said to be perfect so far as they go, but experience will undoubtedly suggest several minor alterations and additions before the telescope is brought practically to work. The photographing of such minute objects as the sun's spots will require at all times the utmost skill and care of an accomplished photographer, even when the telescope has been fairly started. The difficulties yet to be mastered must occupy some considerable time. The first attempts have been confined to the production of negative photographs, but in consequence of the imperfections always existing in the collodion film, it has been deemed advisable to make attempts to produce positive pictures, and recourse may ultimately have to be made to the Daguerreotype process.

The verification of meteorological instruments has been continued on the same plan as in previous years. The following are the numbers of instruments which have been verified since the last meeting of the Association:—

	Baro- meters.	Thermo- meters.	Hydro- meters.
For the Admiralty .....	127	840	605
For the Board of Trade ..	86	360	140
For Opticians and others ..	65	324	6

Total..... 278 1524 751

Mr. Stewart having left the Observatory, as mentioned in the last Annual Report, the Committee in October last engaged Mr. Charles Chambers, of Leeds, on the recommendation of the Council of the Society of Arts. The Committee report very favourably of the intelligence and assiduity with which he has discharged his duties.

JOHN P. GASSIOT, Chairman.

#### Report of the Parliamentary Committee.

The Parliamentary Committee have the honour to report as follows:—"The question discussed in the report of your Committee, addressed to the meeting held at Glasgow in 1855—viz., 'Whether any measures could be adopted by the Government or Parliament that would improve the position of science and its cultivators,' has been much considered by the Council of the Royal Society. They assembled for this purpose in the autumn of last year, and were then assisted in their deliberations by the replies received to the circular of the 20th August last, agreed upon at Cheltenham, and issued to all members of the General Committee. Of these replies an able digest has been prepared by Professor Phillips, who was also a member



the sub-committee appointed on behalf of the Royal Society to consider this important subject. The Council of the Royal Society, at their meeting held on the 15th of January last, passed twelve resolutions, which may be considered as embodying their reply to the question above stated, and your Committee are gratified by observing that most of the recommendations adopted in the Glasgow report have in substance received the sanction of the official representatives of the most ancient and venerable of our scientific institutions. At that meeting of the Council a resolution was passed that the President be authorized to communicate the twelve resolutions to your Committee, with a request that the same might obtain such support from our members as they might consider them entitled to receive. The Council of the Royal Society likewise resolved that a copy of their resolutions should be forwarded to Lord Palmerston by their President, who by letter, bearing date the 28th of January, transmitted the same accordingly. The consideration of the steps proper to be taken in pursuance of the above request, addressed to your Committee, formed the chief subject of our deliberations during the current year. We determined that it was not expedient at present to take any steps beyond moving for the production of the letter of the President of the Royal Society of the 28th January above mentioned, with the copy of the twelve resolutions enclosed therein; and this has been done accordingly, in the House of Lords by Lord Burlington, and in the House of Commons by Mr. Robert Stephenson. We were much influenced in this determination by the consideration of the peculiar circumstances under which Parliament met, which have much abridged the time at their disposal for the discussion of any measures of importance, and by the further consideration that it might not be expedient to precipitate a decision on matters which were new to the general public. Again, though the resolutions in question have received the general approval of your Council, at a meeting held on the 16th January last, we thought it right that the Committee of Recommendations should have an opportunity of expressing their opinion upon them before any steps were taken to urge their adoption on the Government or Parliament. By the retirement of Mr. Heywood from Parliament your Committee have been deprived of the services of one of the most zealous of their members. Mr. Heywood was not only most constant in his attendance, but no one had the objects for which your Committee were constituted more sincerely at heart. The Duke of Argyll and the Earl of Rosse must, in pursuance of the resolution adopted at Liverpool in 1854, be deemed to have vacated their seats in your Committee, but we recommend that they should be re-elected. Your Committee also recommend that the two vacancies caused by the retirement from Parliament of Sir Charles Lemon, Bart., and Mr. Heywood be filled by the election of the Right Hon. Joseph Napier, M.P. for the University of Dublin, and Edward Cooper, Esq., F.R.S., of Makree Castle, M.P. for the county of Sligo. We have also to report the loss of the services of Mr. John Ball. His scientific knowledge and zeal in the cause rendered him a valuable member of your Committee. This vacancy still remains to be supplied by the General Committee.

14th August, 1857.

*The General Treasurer's Account, from August 6, 1856, (commencement of Cheltenham Meeting) to 28 August, 1857, (at Dublin).*

RECEIPTS.	£	s.	d.
To Balance brought on from last account	208	2	4
Life Compositions at Cheltenham Meeting and since	188	0	0
Annual Subscriptions do. do.	301	1	0
Associates' Tickets do. do.	412	0	0
Ladies' Tickets do. do.	346	0	0
Interest allowed by Bank at Glasgow	9	0	10
12 Months' Dividends on £5000 3 per cent. Consols	142	16	3
Reports of Meetings	108	8	7
Catalogues of Stars and Doveslains	44	11	6
	153	0	1
	£1700	0	6

PAYMENTS.	£	s.	d.
Bypaid Expenses of Cheltenham Meeting, sundry Printing, Binding, Advertising, and Incidental Expenses by the General and Local Treasurers.	334	4	4
Printing Report of 25th Meeting, Engraving, &c.	444	3	0
Salaries for 12 Months	350	0	0
Maintaining the establishment of Kew Observatory	350	0	0
Earthquake Waves Experiments	40	0	0
Dredging near Belfast	10	0	0
Do. on the West Coast of Scotland	10	0	0
Investigations into the Molluscs of California	10	0	0
Experiments on Flax	5	0	0
Natural History of Madagascar	20	0	0
Researches on British Annelida	25	0	0
Report on Natural Products imported into Liverpool	10	0	0
Artificial Propagation of Salmon	10	0	0
Temperature of Mines	7	8	0
Thermometers for Subterranean Observations	5	7	4
Life Boats	5	0	0
Balance at the Bankers	11	2	10
Do. due from Treasurer and Local Treasurers	12	15	0
	123	17	10
	£1700	0	6

#### Election of Officers.

It was resolved, on the motion of General Sabine, seconded by Sir W. Hamilton—That the Lord Chancellor of Ireland should be a Vice-President; and on the motion of the Rev. Dr. Robinson, seconded by Lord Enniskillen, thanks were given to the Royal Society for its valuable co-operation. A special vote of thanks was offered to Lord Wrottesley and the Parliamentary Committee; and the Right Hon. Joseph Napier, M.P., and E. J. Cooper, M.P., were appointed members of the Parliamentary Committee, in the room of Mr. Heywood and Sir C. Lemon, retired from Parliament. The Duke of Argyll and the Earl of Rosse, who now retired, were re-elected members of the General Committee.

The following list of officers was adopted for the several sections:—

SECTION A.—President—Rev. T. R. Robinson, D.D., M.R.I.A. Vice-Presidents—Rev. Dr. Whewell, W. Hopkins, Esq.; J. C. Adams, Lord Wrottesley, Rev. Professor Graves, Rev. George Salmon, Sir W. R. Hamilton. Secretaries—Professor Stavelley, P. A. Ninnis, Esq.; W. J. Rankine, Professor Hennessy, Author Curtis, Esq.  
SECTION B.—President—James Apjohn, M.D., M.R.I.A. Vice-Presidents—Dr. Andrews, Professor Davy, Dr. Millar, Rev. W. V. Harcourt, Professor Wilson. Secretaries—Dr. Gladstone, Professor Sullivan, Edmund W. Davy, Esq., M.B.  
SECTION C.—President—The Lord Tabot de Malahide. Vice-Presidents—J. B. Jukes, Director, &c.; Professor Haughton, Colonel Tatlock, Richard Griffith, Thos. Oldham. Secretaries—Professor Harness, Gilbert Saunders, Esq., R. Scott, Esq.  
SECTION D.—President—William H. Harvey, M.D., M.R.I.A. Vice-Presidents—Sir W. Jardine, Bart., Sir J. Richardson, F.R.S., Arthur Jacob, Professor Harrison, W. Ogilvie, Dr. Daubeny. Secretaries—Edwin Lankester, M.D., Robert Patterson, W. E. Steele, M.D., John R. Kinahan, M.B.  
SECTION E.—President—Rev. J. H. Todd, D.D., M.R.I.A. Vice-Presidents—Admiral Fitzroy, Rev. Dr. Hinks, Major-General Chesney, Surgeon-Rev. J. C. Adams. Secretaries—Norton Shaw, M.D., Sec. R.G.S.; Richard Cull, Esq., F.S.A.; Samuel Ferguson, Esq.; Richard R. Madden, Esq.  
SECTION F.—President—The Archbishop of Dublin, M.R.I.A. Vice-Presidents—Thomas Tooke, Esq.; Edwin Cheswick, Esq.; John Stange, Esq., LL.D.; James Lawson, Esq.; William Donnelly, Esq. Secretaries—William Newmarsh, Esq.; Professor Cairnes; Henry Dix Hutton, Esq.  
SECTION G.—President—The Earl of Rosse, M.R.I.A. Vice-Presidents—George Rennie, Esq.; Robert Mallett, Esq.; Sir John Macneil; John Scott Russell, Esq.; William Dargan, Esq. Secretaries—James Thompson, Esq., C.E.; Philip Doyle, Esq.; Henry Wright, Esq.; Professor Downing, LL.D.; Alexander Tute, Esq.

Mr. Crawford was added to the list of Vice-Presidents. The nomination of Professor Allman as one of the Vice-Presidents of Section D was adopted. Professor George Wilson was added to the list of Vice-Presidents of Section B; and Richard Donnelly, Esq., Registrar-General, was added to the list of Vice-Presidents of Section M.

Professor Phillips then read for adoption the following list of the 'Recommendation Committee':—

Rev. T. Robinson, D.D.; Rev. Dr. Whewell, D.D.; the Lord Wrottesley; Professor Stokes; W. Hopkins, Esq.; Rev. Professor Jellett; J. C. Adams; Dr. Daubeny; Dr. Apjohn; Dr. Andrews; J. P. Gassiot, Esq.; the Master of the Mint; D. W. H. Miller; Rev. W. H. Harcourt; Lord Tabot de Malahide; Colonel Tatlock; Robert Hutton, Esq.; W. H. Harvey, M.D.; Lundy Foot, Esq.; Dr. Todd; the Archbishop of Dublin, Dr. Handcock; Thomas Tooke, Esq.; Earl of Rosse; George Lennie, and William Fairbairn.

#### SALE OF CURIOUS BOOKS.

MESSRS. SOTHEBY AND WILKINSON had a three days' sale, last week, of some curious and rare books, of which the prices of several are worthy of record. A fine large paper copy of Britain's Beauties of England and Wales, in 26 volumes, bound in Russia, sold for 157. 5s. The first edition, 1749, in 6 volumes, of Fielding's Tom Jones, 2l. 19s. A copy of the old Genevan Bible, 1560, dedicated to Queen Elizabeth, 10l. 10s. A rare black-letter Bible, Ihon Cawoode, 1561, 11l. Book of Common Prayer, in black letter, Worcester, J. Oswen, 1549, 6l. A set of the Camden Society's Works, in 54 volumes, 4l. 6s. Sir Francis Drake. A true coppie of a Discourse written by a gentleman employed in the late Voyage of Spaine and Portingale, black letter, 1589, 3l. 3s. Of the next five lots we quote particulars from the catalogue:—

Bible. The Golden Legende, conteynynge the Lyves and Hystories taken out of the Byble, and Legendes of the Saintes, two parts in one, woodcuts. Black letter, very rare, fine large copy, but wanting six leaves in the second part (folio 40, 41, 42, 43, 111, and 258 containing colophon), splendidly bound in morocco, super extra, gilt edges, tooled in the antique style, by Hayday. Julian Notary, 1503. This extraordinary work exhibits the earliest printed specimen of an English translation of the Bible, or rather portions, as it confines itself chiefly to the historical books and gospel. A very curious fact is that the editor and translator, William Caxton, has used the word "breches" in his rendering of Genesis iii. 7. "And thence they toke fygge levys and sewed theym togyder for to cover theyr membris in the maner of breches," showing that the Genevan version is not the original of this quaint expression. 21l.

Biblia. The Bible, that is the Holy Scripture of the Olde and New Testament, faithfully and truly translated out of Douche and Latyn into Englishe (by Miles Coverdale). Woodcuts by H.L. Beham (No. 1 of Lea Wilson). Black letter (Angular Swiss or German), quite perfect, with the exceptions mentioned in the note, bound in rich brown morocco super extra, tooled edges and sides, by F. Bedford. First English Bible printed, extremely rare, 1535. This first Protestant translation of the whole Bible into English, and probably one of the rarest books in the language, is considered as the joint production of Tyndale and Coverdale, but is usually termed "Coverdale's Bible." The possession of a fragment only of our earliest Bible has always been deemed a *sine qua non* with Biblical collectors, and the prices paid for such fragments ranging from 30l. to 150l. is the surest test of the difficulty experienced in procuring even these. The present is a most desirable copy, but having the preliminary leaves, folios 1, 2, 5, 6 in Genesis, the last seven leaves of Revelations, and the map in wonderful facsimile by Harris. When it is remembered that no perfect copy as yet is known, and that the Earl of Leicester's is the only one with the title, we need not be surprised at the late Mr. Lea Wilson, who possessed one with title and first leaf of dedication in facsimile, offering 100l. to any person furnishing him the original title, and the like sum for the next leaf, or that he did not live to see the accomplishment of his earnest desire to be the owner of the first complete copy. At his death his copy passed into the hands of Mr. Dunn Gardner, at whose sale, on July 7, 1854, despite the facsimiles, it produced 365l. Mr. Henry Stevens, in his forthcoming account of English Bibles, has the following interesting note with regard to the printing of the work: "Nothing whatever is known as to where or by whom it was printed. Since the time of Humphrey Wanley it has generally been ascribed to Christopher Frochover, of Zurich, who printed the quarto edition in a similar, though smaller type, in 1550; but Christopher Anderson, in his 'Annals of the English Bible,' says, in his Historical Index, p. 31, that Frochover 'was certainly not the printer of Coverdale's Bible in 1535, as ascertained by the present author

when at Zürich." Anderson does not give the grounds of his conclusion, but he is probably correct, as no conclusive evidence has yet been adduced in favour of the Zürich printer. My late and lamented friend Mr. Wm. Pickering had as early as August, 1851, completed a series of investigations, by which he came to the conclusion that the book was printed by Christian Egenolf, of Frankfurt. He based his argument upon the similarity of the woodcuts and the type of Coverdale's Bible, and a German Bible of the same size page printed by Egenolf in 1534; and upon a little volume of Bible plates by H. S. Beham, first printed by Egenolf in 1533, and again in 1536, 1539, and 1551, with some additions." Mr. Stevens, however, after examining the works mentioned by Pickering, came to precisely the opposite conclusion, for he found that although the woodcuts and type closely resembled each other, they were not identical, and therefore naturally observes, "as it is unlikely that any printer of that day would have in his office two sets of woodcuts and two founts of type so nearly alike yet different, we may, I think, fairly conclude that Egenolf was not the printer." Mr. Stevens seems to have taken great pains to solve the mystery, but after many fruitless comparisons of his Coverdale with works from the presses of coeval printers, candidly confesses "I have found no clue." A leaf of Egenolf's German Bible of 1534 is inserted in the present copy, so as to enable every beholder to judge this knotty point by comparing the one with the other. 190l.

Bible (The), which is all the Holy Scripture, in which are contained the Olde and Newe Testament truly and purely translated into English by Thomas Matthew. Woodcuts. Black-letter, very rare (No. 4 of Lea Wilson), a desirable volume, but has the title and next five leaves in admirable facsimile, and wants the first and last of the thirteen leaves of table, the list of books, the title to the New Testament, O 1 in Revelations, the last leaf of the New Testament, and the two following leaves of table. A few leaves mutilated are mended. No other defects are known, but the volume will be sold not subject to collation. Good copy, in old calf. 1537. This edition was apparently printed abroad for Grafton and Whitechurch, and although the version is styled Matthew's, it varies but little from Tyndal and Coverdale's translation, the few emendations and additions it contains having been furnished by John Rogers, the first martyr in Queen Mary's reign, who under the assumed name of Matthew superintended the publication. The work is beautifully printed, but a few important errors occur in the text, e.g. John xx, "and put my finger into the holes of the nails," is omitted, and so is in 1 Cor. xi, "This cup is the New Testament in my blood." In Hebrews vi., "Let us love the doctrine" is printed for "Leave the doctrine." The disputed verse in 1 John v. 7 in smaller type. 23l.

Bible (The Most Sacred) which is the Holy Scripture, containing the Old and New Testament, translated into English, and newly recognized with great diligence, after most faithful exemplars, by Richard Taverner. Black-letter (No. 5 of Lea Wilson), fine copy, quite complete, with the exception of having the title in beautiful facsimile by Harris, and wanting the three leaves of table at end; morocco extra, gilt edges, by F. Bedford. John Bydell for Thomas Barthlet, 1530. This is the first edition of Taverner's Bible, and is of great rarity. In it the disputed text, 1 John v. 7, is printed in smaller type. The word *peace* is uniformly printed *peaz*, thus showing its transition from the Latin. Mr. Lea Wilson not having been fortunate enough to secure a perfect copy, fell into some errors in giving his collation. 36l.

Byble (The) in Englyshe, of the largest and greatest volume, auctorysed and apoynted by the commandement of oure moost redoubted Prynce, and Souerayne Lorde, Kynge Henrye the VIII. supreme heade of this his church and Realme of Englande; to be frequented and used in every church w<sup>th</sup> this his sayd realme, accordynge to the tenour of his former inuincions geuen in that behalf. Ouersene and perused at the comānd

mēt of the kynges hyghnes, by the ryghte reuerende fathers in God Cuthbert [Tonstal] bysshop of Duresme, and Nicolas [Heath] bisshop of Rochester, 1541. Black-letter, extremely rare, fine copy, quite complete; morocco, super extra, gilt edges, by F. Bedford. Printed by Edward Whitechurch, fynysht in Nov. 1541. This is apparently No. 11 or 12 of Lea Wilson's list, whose copy must have been not quite perfect. The title within the Holbein border has the arms of Cromwell effaced, and the wood block cracked. The Prologue of Archbishop Cranmer occupies three leaves. We do not call to mind a perfect copy of this edition of Cranmer's Bible having occurred for sale for many years. 90l.

Henry VIII. Boke called the Institution of a Christian Man, black letter. 4l. 10s. First Edition of Milton's Paradise Lost, 1667, 14l. 10s. The Newe Testament in Englyshe and Latin of Erasmus Translacion (Tyndale's version, edited by Sir John Cheke), 22l. A fine copy of De Bry's Collectiones Peregrinationum in Indian Orientalem et in Indian Occidentalem, in 10 volumes, profusely illustrated, 1590-1634, 160l. De Bry's Merveilleux et Estrange Rapport, toutefois fidele, des Commoditez que se trouvent en Virginia, 1590, 18l. 10s. Dives et Pauper, that is to say, the riche and the pore, fructuously trefyng upon the X. Commandementes, black letter, 50l. Higden (Ranulph, Monk of Chestre) Polychronicon, in which book ben comprised wonderful histories, &c., black letter, Caxton, 1482, 70l. Shakespeare Plays, Third Impression, 1664, 26l. 10s. Voragine's Golden Legende, translated by William Caxton, black letter, printed by Wynkyn de Worde, 1527, 23l. 10s. Total 1675l.

#### GOSSIP OF THE WEEK.

PROFESSOR ROGERS, of the United States, who has been for some time in this country engaged in preparing for publication his work on the geology and physical geography of North America, is a candidate for the chair of Natural History in the University of Glasgow, vacant by the death of Professor Couper. The chair is in the gift of the Crown, and if no candidate of greater eminence should come forward, it will be the general feeling of naturalists that the government would do a graceful act, as well as serve the best interests of the Glasgow College, by appointing the distinguished American geologist to the Professorship. In the United States great liberality is shown in such appointments, of which we need only mention the name of Professor Agassiz as an instance.

Delhi has not fallen, nor is it likely to fall now till the reinforcements from Europe arrive, till the rains are over, and the cold season approaches. The painful suspense and deap anxiety about what is passing in the East are increased by the long time necessary for obtaining tidings, even by the accelerated overland route. At this moment there is nothing that would bring greater comfort to English homes, and at the same time prove of public benefit, than a more rapid and certain communication with India. Why should this be delayed? For a sum quite trifling compared with what is constantly squandered on schemes of a hundredfold less importance, Calcutta and London could be brought within a week's day, within a day's distance. From Suez to Aden is about fifteen hundred miles, and from Aden to Kurrachee, across the Persian Gulf, about the same. If the Atlantic cable were used, this line could be completed in time for transmitting intelligence of the first events of the coming campaign. The carefully estimated cost of this work is not over 700,000l. If the proposal should be adopted, it is impossible to leave the line incomplete from Alexandria to Malta, and thence either by Cagliari or otherwise to join the continental wires. By the time that Delhi is regularly invested, it is certain that order will be restored between Calcutta and the north-west provinces, and the telegraphic communications throughout India reopened. Were promptness used equal to

the occasion, it is quite possible that before the close of the year 1857, the centenary anniversary of the battle of Plassey, tidings of what is passing in all the great cities of India could be read in the London newspapers of the next morning. There are no physical obstacles to this great work being achieved. The late Mr. Stephenson, on being asked about the feasibility of some undertaking, which some might have deemed impossible, said he had no fear of difficulties with matter, but he was often baffled in the management of men. It is here that the obstruction to the present proposal is to be feared. The projectors have to overcome "the insolence of office," the indolence of public functionaries, and the selfishness of rival interests. Many men of influence are committed to the Euphrates Valley scheme, in which they hold shares. A proposal is at this moment before the Board of Control and the India House to establish a postal route to the East via Seleucia and Bussorah, by Arab messengers, and from Bussorah to Kurrachee by steamer. The sea voyage would take four days between these ports, and from Seleucia to Constantinople five days, while the intermediate land transit might be counted at about eight days. The lighter portion of the Indian mail might thus arrive in twenty days instead of thirty; but it will be creditable to the British Government if they allow private interests to prevail in this direction, instead of carrying out the far more feasible and expeditious line of communication by the Red Sea. We trust that the expression of public opinion will be strong enough to compel the authorities to adopt the latter line.

The continued activity of Mount Vesuvius is attracting an unusual number of visitors, some for scientific observation, and others for the gratification of curiosity at this display of one of the grandest of physical phenomena. Professor Palmieri, the successor of the distinguished Melloni of Naples, is frequent in his visits, in order to watch the progress of the eruption, and to take notes to be afterwards embodied in a scientific memoir. A graphic and popular account of the present state of the mountain will be given to the British public by Mr. Albert Smith, who, with his usual tact, has announced this as the subject of the new part of his "entertainment" next season. In closing his performance at the Egyptian Hall last Saturday, Mr. Albert Smith stated that he was then making his 1744th appearance in that place, and with justifiable complacency recapitulated his adventures abroad and his efforts at home to provide an exhibition at once amusing and instructive. The success of his undertaking Mr. Smith modestly ascribed in no small degree to his exertions for repressing extortion and securing comfort in his monarchic establishment. For five years Mr. Smith has gone on with ever increasing popularity, and though the story of Mont Blanc has long ago been "used up," his vivid descriptions of scenery and racy sketches of character have lost none of their freshness and interest. We wish him all success in the "fresh fields and pastures new" from which he is to provide entertainment for next season.

The Crystal Palace directors appear to be entering with spirit on the new line of policy to which they have been forced by stress of circumstances. Instead of wasting thousands of pounds on opera concerts for select audiences, they have begun to direct more attention to the masses of the people, who will be attracted by less costly and more suitable entertainments. On Saturday, a day of English games and Scottish sports was announced, of the kind which gave so much satisfaction some years ago in Holland Park. It being also the festival of the Early Closing Association, nearly twenty thousand visitors were attracted to Sydenham, and the place assumed something of the appearance of life and cheerfulness. On Monday the same amusements were repeated, and above thirteen thousand spectators assembled. On Tuesday the Ancient Foresters and their friends mustered to the number of nearly thirty-four thousand, besides five or six hundred season ticket holders. This is, we believe, the largest number yet assem-



bled on an ordinary day at the Crystal Palace. Everything was satisfactory and well managed except the means of transit. Till better access to the palace can be provided the attendance will always be limited, and the delay and risk in attempting to get away by the railroad in the evening must deter many from repeating their visits. Many a vow was made on the platform never to venture again into such a scene of riot and confusion, and the managers would do well to provide better for the comfort and safety of the public in leaving the palace, and not send so many away, if not with broken ribs and bruises, at least in discomfort and bad humour.

The Surrey Gardens Company, as we intimated last week, has turned out an affair of the Royal British Bank order. Some scheming and dishonest speculators have deceived and pillaged the shareholders, who held "an indignation meeting" on Tuesday. The petition of the directors to the Court of Bankruptcy to wind up the affair is a crafty move, and it was felt that the shareholders must oppose it to save themselves from ruin. If the affairs of the company were wound up, and the property forced to sale in its present depreciated condition, the "managing" directors would probably re-buy the building for a trifling sum, and recommence speculation. Some very distressing as well as scandalous exposures were made at the meeting. It was affirmed that Mrs. Seacole has been deprived of the money generously contributed by the public for her benefit. M. Jullien, too, whose services have been indefatigable for the last fifteen months, has been a heavy sufferer, and has been unable to procure payment for himself and his orchestra. The "stars" who have been engaged to attract audiences have, however, taken care of their interests. Madame Albani, for instance, we learn had the prudence not to appear till the money was paid down for each night of her performance. The first year's dividend of ten per cent. was a bait to allure new victims, and with the exception of the cost of the building of the Music Hall, (erected at a cost of 18,000*l.* on ground with only eight and a half years' lease to run!) no satisfactory account can be given of the money contributed by shareholders, or received from the public for admission. From beginning to end the whole affair has been a disgraceful fraud, and yet we have little expectation that this new warning will deter credulous people from furnishing funds for starting equally dishonest schemes. The act passed last session will surely meet this case, where the directors paid dividends while the company was insolvent, and published false statements of the accounts.

It is seldom that a great metropolitan improvement presents so extraordinary a combination of advantages and facilities as the proposal now before the public, for uniting most of the railway lines at a central terminus, within a few hundred yards of the Houses of Parliament. By the consent of the Marquis of Westminster, the channel of the Grosvenor Canal may be obtained for a railway, communicating with all the lines on the south of the Thames, which would be crossed by a tubular bridge between Westminster and Pimlico. The immense space of ground now occupied by the Grosvenor basin near Victoria-street, Westminster, would form the West-end terminus, and so ample is the accommodation, that a separate dépôt and platform could be provided for the branch to each of the lines in communication with this centre. With the exception of the passage across the river, which is a small undertaking after the Britannia bridge, there are no engineering works of any consequence to cause difficulty. The Canal has simply to be cleared, and the bed brought up to the desired level by rubbish carted into it. In schemes for metropolitan railways hitherto, the expense of purchasing house property has been the chief obstacle, but here the ground is clear in the most important part of the route, and the plan altogether is so practicable, that we have every hope of seeing it speedily carried into execution.

Mr. Bentley and Messrs. Smith and Elder are, we observe, issuing their more popular works in a

cheap form, giving an excellent class of reading to the railway traveller, and bringing many admirable publications within the limits of a much larger circle of intelligent readers than possessed the means of obtaining them in their original form.

Professor D'Arrest of Leipsic, well known from his valuable work on nebulous spots, has been appointed to the long vacant chair of Astronomical Professor in the Academy of Copenhagen.

In the last sitting of the Academy of Sciences of Paris, a letter was read from M. Quetelet, Perpetual Secretary of the Academy of Sciences of Brussels, suggesting that the plan devised by Lieutenant Maury of Washington, for having uniform meteorological observations taken at sea, by vessels of the maritime nations, which plan was unanimously approved of four years ago, but the execution of which was prevented by the breaking out of the Crimean war, shall forthwith be carried into effect. The suggestion seems to us well worthy of being acted on.

The annual meeting of the Institute of France we recorded last week. Each of the five Academies that compose the Institute is accustomed to hold a public annual meeting, in which it deals with matters falling within its *specialité*. The annual meeting of the Académie Française took place on Friday last at Paris. M. Villemain, the perpetual secretary, read a report on the "concours" of 1857; it was, it is scarcely necessary to say, marked by that elevation of thought and chastened eloquence of style for which the eminent Academician is noted. The first subject on which it touched was the prize offered for the best poem on the Eastern war; and it made known the humiliating fact, that though not fewer than 150 poems were sent in, only two possessed sufficient merit to be noticed at all, and that their merit was not great enough to warrant the prize being given to either of them. In consequence, it was intimated that competition for the prize would remain open for another year. M. Villemain afterwards passed in review the works to which the Academy has granted prizes—the most important of them were M. Rosseeuw's 'Histoire d'Espagne,' which obtained the Bordin prize of 120*l.*; M. Poirson's 'Histoire de Henri IV.' which obtained one of the Gobert prizes; and M. Lavallée's 'Histoire de la Maison St. Cyr,' which obtained another Gobert prize. M. Vitet afterwards read a report, very neatly drawn up, on the awards which the Academy has made of the Montyon prizes for "acts of virtue." It revealed really extraordinary instances of devotedness to suffering humanity. M. Legouvé then read a small poem, in which the material misery of the poor was contrasted with the moral misery of the rich. The prizes which the Academy intends to give on future occasions were afterwards announced. We noticed amongst them one for next year of 120*l.*, for a treatise on Thucydides; one of 160*l.*, for 1859, for a "Lexicon of the Language and Style of Corneille;" and one of 400*l.*, in 1862, for a successful dramatic work in three or more acts, and in verse, which shall, with literary merit, inculcate a high moral lesson.

It has been already announced in our columns, that the sale of the celebrated Albani library is to take place this year in Rome. The auction is now fixed to take place in November, but a paternal government has decided that the MSS. should not be sold in Rome, lest they should peradventure fall into the hands of those who might misuse them. They are therefore to be sealed up and forwarded to Count Castelbarco, of Milan, and the Marquis del Bagno, of Mantua, who are the heirs of the property. The Albani sale will be followed, in the January of 1858, by that of the hardly less-renowned collection of the Altieri family. This library was founded by Cardinal Giovanni Battista Altieri, who lived from 1589 to 1654, and was afterwards greatly added to by Cardinal Paluzzo Altieri, a nephew of Pope Clement the Tenth, who expended one hundred thousand scudi in codices alone. There will be brought to the hammer two thousand MSS., con-

taining many valuable documents from the private correspondence of nuncios, ambassadors, and cardinals, members of this illustrious house. The printed works are contained in eleven thousand four hundred lots, and are many of them full of rare and valuable matter connected with the history of the republics and smaller states of Italy in the early period of the middle ages. The catalogue is nearly completed, and will be in itself a most interesting work.

The first volume of the 'History of Bavaria,' a work ordered by the King, and paid for out of the government funds, is now nearly finished, and will be published in the course of the year. It forms one of four volumes in forty sheets each, which is to give a complete account of the history of Bavaria, the general statistics of the country and the people, together with the climate, zoology, geology, and botany, the social condition of the people, with an account of their food, health, clothing, trades, occupations, and the predominant causes of illness and death.

The Italian papers are filled with the papal progress and the holy father's doings and sayings. During his stay in Ravenna he visited Dante's tomb, and being requested to insert his name in the visitors' book, he sat down and wrote those beautiful lines from the 'Purgatorio':—

"Non è il mondan rumore altro che un fiato  
Di vento, che or va quindi, ed or va quindi  
E muta nome, perchè muta lato."

The authorities at once called a meeting, testified to the papal handwriting, and determined that the book should be deposited in the Ravenna records. Owing to this the names and autographs of many John Smiths and William Joneses will be unexpectedly handed down to a wondering posterity.

The German papers announce the death of Dr. Dietrich Martin, in Gotha, in his eighty-fifth year. He was well known and much honoured in legal circles, and may be said to have been the Nestor of German writers on jurisprudence.

M. Lerminier, an eminent French critic, and a Professor of the Collège de France, has just died in Paris.

Herr Hempel, an eminent dignity of the church, died at Altenburg, on the 2nd instant, in the eighty-ninth year of his age. He was the author of several extremely popular religious works.

F. van der Kerkhoven, one of the most original and justly celebrated of the modern Flemish poets, has just died at Antwerp, in the flower of his age.

#### FINE ARTS.

*A Hand-book to the Waxed Paper Process in Photography.* By William Crookes. Chapman and Hall.

It is needless for us to say more than to announce the publication of a treatise, designed for a particular class of photographers only, and which no one of them should be without. The preface informs us that the general outline of the work is founded on the 'Description of the Waxed Paper Process employed for the Photometeorographic Registrations at the Radcliffe Observatory,' a paper which forms a supplement to the volume of observations for the year 1854. The author, Mr. Crookes, further adds:—

"Having been occupied for some time in superintending and arranging the meteorological department of the above observatory, I was, on leaving, requested by the talented observer, M. J. Johnson, Esq., to place on record for the benefit of their staff a description of the photographic process which I had so successfully introduced for recording the observations in their meteorological instruments: viz. the Barograph and Thermograph of Mr. Ronald's construction, and a Pluviograph designed and made by myself.

"The experiments which I found it necessary to undertake, ere I arrived at the above results, occupied my unremitting attention for upwards of

a twelvemonth, and were conducted on a scale commensurate with the great importance of the object which I had in view.

"A vast number of the facts thus brought under my notice relate to points of chemical, optical, and photographic science which are alike common to every branch of the art. Some few, necessarily, apply merely to the especial purpose which then engaged my attention; whilst others are only applicable to the Waxed Paper Process for the ordinary requirements of the photographer.

"Latterly I have occupied myself in extracting from these innumerable data, materials wherewith to build a process which I can confidently present to my readers as possessing many advantages over those in general use. In the following pages the several operations in the Waxed Paper Process are most minutely described, and I venture to say, that any person who is at all conversant with the ordinary manipulations required in photography, will, by carefully following these directions, at once meet with success."

This will convey an adequate idea of the contents of the volume, which is, in fact, an ample and minute detail of directions for the practice of an art which the writer says he thinks is better adapted for the ordinary requirements of the tourist or amateur, than any other paper process whatever.

Mr. Thomas Uwins, R.A., died on Tuesday at the advanced age of 75. He held the office of Surveyor of the Queen's Pictures.

The Scottish papers report the death of Mr. Shiells, the oldest member of the Royal Scottish Academy. Mr. Shiells was a native of Berwickshire. As an animal painter he was the greatest artist that Scotland has yet produced. For many years he was employed by Professor Low in forming the fine collection of pictures of breeds of cattle and other animals connected with farming pursuits, which enriches the museum attached to the agricultural class in the University of Edinburgh.

An extraordinary meeting of the religious art unions of Germany will be held this year on the 9th, 10th, and 11th of September, at Ratisbon; the last meeting took place in this town in 1849, and the present, it is expected, will be more than ordinarily well attended and interesting.

In the last sitting of the Academy of Sciences of Paris it was announced that the photographing of microscopic insects and objects has commenced, and that it gives every promise of being highly useful to science. It was also stated that the new comet has been seen at Cambridge, Rome, Berlin, and Vienna.

The ancient frescoes of Hanns Burkmaier, on the walls of the Maximilian Museum of Augsburg, are now fully and completely cleaned and restored by Herr Eigner, one of the first artists perhaps in his 'genre' in the world. The scaffolding was last week entirely removed, and an incredible number of the curious of all classes has since then filled the room and expressed an unqualified admiration of the fine works of this too little known old German master. By order of the magistrate, a tablet has been let into the wall, close to the picture of the smiths working at glowing hot iron, one of the best in the series, announcing that the town of Augsburg empowered Herr Eigner, in the year 1856, to restore the pictures of the celebrated painter, Hanns Burkmaier, which he executed in 1514, and which, through the effects of time, had fallen into complete decay.

It has been determined at length to erect two monuments in Frankfort, to two victims of popular frenzy, who fell during the time when unbridled licence reigned in 1848, one to General von Auerwald, who was killed at the corner of Schmidt's garden, the other to the ill-fated Prince von Licknowski, who was struck down about two hundred and fifty yards further on, at the foot of a tall poplar tree. The poplar is gone, all but a withered stump, having by degrees been cut away for memorials by the thousands of curious who have since visited the spot. It is

proposed to enclose the remains of the tree with an iron railing, and to erect suitable monuments to each of the victims.

#### MUSIC AND THE DRAMA.

FOR the musical world, the Worcester Festival has been the great event of the week, and it has in all respects proved highly successful. The meeting commenced as usual with a full cathedral service, when a selection of chants, anthems, and other pieces of classical sacred music, were introduced. Handel's *Dettingen Te Deum*, Mendelssohn's setting of the 55th Psalm, and a new anthem by Dr. Elvey, composed for the occasion, *Sing, O Heavens*, formed part of the musical service, the psalms of the day being given to a chant of the Rev. W. H. Havergal, and the 'Venite' and 'Jubilate' to chants of Dr. Tallis. The sermon, by the Rev. Canon Lewis, brother, it is stated, of the Chancellor of the Exchequer, was a homily against covetousness, from Luke, ch. xii. v. 15, and had the effect of producing a collection of 260*l*. The collections on the subsequent days were also of considerable amount. It is needless to record any details of the performances, the programme of which we gave last week. Almost all the selections at the concerts in the College Hall consisted of pieces which were familiar to every one during the last London season, and the performances were such as might be expected from such artists as Madame Novello, Madame Weiss, Miss Dolby, Mrs. Hepworth, Miss Vinning, Miss Palmer, Mr. Sims Reeves, Herr Fornes, Signor Gardoni, Mr. Weiss, and the other eminent vocalists engaged. M. Sainton, Mr. G. W. Cousins, and other performers, also displayed to advantage their skill on their instruments. In the cathedral meetings, Mendelssohn's *Elijah*, Handel's *Messiah*, and selections from *Israel in Egypt*, from Mr. Costa's *Eli*, and other works, were given. The selection from *Israel in Egypt* was the same as that used at the last Birmingham Festival, and the choruses on this occasion were delivered with an effect rarely surpassed. The chief solos were taken by Madame Novello, Miss Dolby, Mr. Sims Reeves, and Mr. Weiss, different vocalists having their share in the triumphs of the other days. The Duke of Cambridge, who was a guest of his late tutor, the Rev. John Ryle Wood, formerly chaplain to Queen Adelaide, now Canon of Worcester Cathedral, helped to increase the animation of the meeting, his presence being welcomed both from personal respect, and as affording an occasion for a demonstration of loyalty and patriotism, which found vent in singing the 'National Anthem' in the middle of the concert at which he made his first appearance. A source of satisfaction of less impulsive but as satisfactory a kind, supplemental to the musical pleasures of the meeting, was the appearance of the "restorations" of the venerable cathedral, which are excellent as far as they have gone. Large funds will yet be necessary for carrying out all the proposals that have been approved, but for the renovations and repairs that have been effected, in keeping with the ancient character of the building, the Dean and Chapter, and the architect and workmen employed, deserve high praise. The number of persons present at the cathedral performances being about eleven hundred each day, and the concerts being attended by about half that number, the collections in the mornings being also liberal, we hope that the treasurer of the benevolent fund for which the festivals of the three choirs were established, will have a favourable report to give of this year's meeting at Worcester.

An operative company, including Madame Grist, Madame Gassier, Signor Mario, and Herr Reichardt, has this week been performing at the Princess's Theatre, where many have had an opportunity of witnessing the most favourite operas repeated in a manner satisfactory to those who had not that enjoyment during the season. At the Surrey Gardens a special series of concerts, conducted by M. Jullien, under the arrangements of Mr. Beale, who has obtained the control of the Gardens since

the discomfiture of the Directors of the Company, has shown how successful the Surrey Gardens might be under proper management. Madame Alboni, Madame Grist, and Madame Gassier, are among the names by which the attractions of this closing festival are sustained. We are glad to learn that the affairs of the Company, though disastrous enough, are not quite so bad as was anticipated, and that Mrs. Seacole, at least, will not lose all her public testimonial. It will be very hard if M. Jullien and his musical associates should be sufferers, after the unusual exertions made by them during the past year. If the worthy conductor had the gardens, or some other place of musical entertainment, in his own hands, he would not want ample public support.

The Weimar committee has sent out its invitations for the great festival in September. The paper announces that on the second, third, and fourth of September, masterpieces of the great German dramatists will be produced at the theatre, and the principal characters supported by the most celebrated artists in the country; that on the fifth an extra train will run to Eisenach, for which invited guests and strangers will be provided with free tickets, which will enable them to visit the Wartburg, and return in time for a grand concert conducted by capellmeister Liszt. The poet rooms in the castle, (which are well worth seeing,) the houses of Goethe and Schiller, full of reminiscences of these great men, the picture gallery and the library, will be thrown open to the public during the festival. In the gallery of the castle there is a very fine collection of drawings by Carstens, which is usually difficult of access. A bureau has been opened in the town hall, at which strangers, by previous written applications, may procure tickets, securing them comfortable and economical lodgings in Weimar, without trouble or bustle. The paper is signed by the courtmaster of the ceremonies, the Mayor of Weimar, and a town councillor.

#### NATIONAL GALLERY COMMISSION.

Letter from Professor Faraday to the Dean of St. Paul's, on the state of the Marbles in the British Museum.

Royal Institution, Albemarle Street, W.  
30th April, 1857.

My dear Dr. Milman,—I wish I could write anything satisfactory, in reply to your note about the marbles in the British Museum. I examined them, in respect of their condition as to dirt, on the 24th instant; and more particularly a Caryatide, No. 128; the Shaft of a Column, No. 118; and some of the Metopes in the Elgin Gallery. The marbles generally were very dirty; some of them appearing as if dirty from a deposit of dust and soot formed upon them, and some of them as if stained, dingy, and brown. The surface of the marbles is in general rough, as if corroded; only a very few specimens present the polish of finished marble: many have a dead surface; many are honeycombed, in a fine degree, more or less; or have shivered broken surfaces, calculated to hold dirt mechanically.

I found the body of the marble beneath the surface white. I found very few places where the discoloration seemed to be produced by a stain penetrating the real body of the unchanged or unbroken marble. Almost every where it appeared to be due to dirt (arising from dust, smoke, soot, &c.) held, mechanically, by the rough and fissured surface of the stone.

The application of water, applied by a sponge or soft cloth, removed the coarsest dirt, but did not much enlighten the general dark tint. The addition of rubbing, either by the finger, or a cork, or soft brushes, improved the colour, but still left it far below that of a fresh fracture. The use of a fine, gritty powder, with the water and rubbing, though it more quickly removed the upper dirt, left much imbedded in the cellular surface of the marble.

I then applied alkalies, both carbonated and caustic: these quickened the loosening of the sur-



face dirt, and changed the tint of the brown stains a little; but they fell far short of restoring the marble surface to its proper hue and state of cleanliness. I finally used dilute nitric acid, and even this failed; for, though I could have gone on until I had dissolved away the upper marble, and left a pure surface, even these successive applications, made of course with care, but each time producing a sensible and even abundant effervescence, and each time dissolving enough marble to neutralize the applied acid, were not sufficient to reach the bottom of the cells and fissures in which dirt had been deposited, so as to dislodge the whole of that dirt from its place.

The examination has made me despair of the possibility of presenting the marbles in the British Museum in that state of purity and whiteness which they originally possessed, or in which, as I am informed, like marbles can be seen in Greece and Italy at the present day. The multitude of people who frequent the galleries, the dust which they raise, the necessary presence of stoves, or other means of warming, which, by producing currents in the air, carry the dust and dirt in it to places of rest—namely, the surfaces of the marbles; and the London atmosphere in which dust, smoke, fumes, are always present, and often water in such proportions as to deposit a dew upon the cold marble, or in the dirt upon the marble, are never-ceasing sources of injury to the state and appearance of these beautiful remains. Still, I think that much improvement would result from a more frequent and very careful washing; and I think that the application of a little carbonated alkali (as soda) with the water would be better than soap, inasmuch as the last portions of it are more easily removed. It requires much care in washing to secure this result; but whether soap or soda be employed, none should be allowed to remain behind.

Dry brushing or wiping is probably employed in some cases; if so, it should be applied with care, and never whilst the objects are damp, or from the condition of the weather likely to be so. In several cases there is the appearance as if such a process had resulted in causing the adhesion of a darker coat of dirt than would have been produced without it; for convex, front, underlying portions of a figure are in a darker state than back parts of the same figure, though the latter are more favourably disposed for the reception of falling dirt. I am, my dear Dr. Milman, humbly and truly yours,

M. FARADAY.

The Very Rev. the Dean of St. Paul's,  
&c. &c. &c.

*A Letter to the Secretary, from James Glaisher, Esq., on the extent of the London Smoke, and its comparative density at different parts of the Metropolis.*

Lewisham, February 13, 1857.

My dear Mr. Butler,—I do not know of any observations having been taken to determine the comparative density of the smoke at different parts of the metropolis.

The effects of the smoke of London extend for more than five miles. I know the clothing of sheep is blacker beyond Eltham, and the blackened jackets of sparrows also prove its influence beyond for ten miles.

Formerly I have traced the smoke of London to fully twenty miles, but it has, I think, diminished lately. It formerly was no unusual circumstance to trace the dark band, as seen from the top of the Observatory, to more than fifteen miles. I do not, however, know of any trustworthy experiments which have been made for this purpose.

If blackened bulb maximum-thermometers were placed at different parts of London, and in its suburbs, the effects of the thick atmosphere would be measured by the less high readings of the thermometer in those places.

Care of course would be required, both in the selection of the instruments as well as in their position in each locality.—Faithfully yours,

JAMES GLAISHER.

H. Montagu Butler, Esq.

*Report by Sir C. L. Eastlake, P.R.A., on the State of Pictures in some of the Metropolitan Collections.*

In compliance with the request of the Commissioners I have inspected certain pictures, preserved in the various public institutions in London, to which my attention was especially directed. I have added some notices of the state of other works in similar institutions not included among those indicated by the Commissioners.

TEMPLE.

The large picture, ascribed to Vandyck, representing Charles I. on horseback, attended by an equerry bearing his helmet, is the principal picture in the hall of the Middle Temple. The mere surface appears to be in a good state, the canvas exhibiting no inequalities; whereas the canvas of some other portraits, hanging near it, is loose. The picture has suffered greatly in general effect. The whole of the architectural portion and the whole of the foreground have become dark; the dress of the helmet-bearer and the shadows of the horse are also, in part, reduced to the same state. A large proportion of the vast canvas is now a dark mass, in which the objects are scarcely distinguishable. The sky and landscape are obscured in the same proportion. The head of the King is somewhat lighter than other portions originally, perhaps, of equal brightness. This is probably in consequence of the head having been, at some former period, more cleaned than the rest of the picture. The head of the attendant (which, though the shadows have darkened, is quite in the manner of Vandyck), originally lower in tone, is in the same obscured state as the rest of the picture.

It is probable that the monotonous darkness of large portions of this work is not referrible to the effects of a London atmosphere alone, but partly, if not chiefly, to the use of a dark ground, or priming.

Among the other portraits in the same hall, that of James II. may be mentioned as being in an obscured condition, in the face, as well as in the other parts. This appears to be also the consequence in a great degree of a dark ground.

The discoloration of the pictures generally, caused by smoke, must, however, at a former period have been considerable. It seems that a charcoal and wood fire was at first kept burning in the centre of the hall, and that, in consequence, the pictures had some sort of cleaning every five or six years. The fire was discontinued early in the present century, and since then the cleaning has not been renewed. The effects of a former partial cleaning are apparent in a German picture of the *Judgment of Solomon*, the lighter portions of the principal figures having been made especially conspicuous.

*The Parliament Chamber (Temple).*—Several portraits are preserved here, some comparatively modern. The older specimens, from having been painted originally with an insufficient body of colour, have a weak and flat as well as a dingy effect. I was informed that all the pictures in this apartment had been cleaned in 1851.

*The Library.*—Portrait of Robert Ashley, the founder, 1641. A very indifferent work, extremely dark throughout; the canvas injured in parts. Injuries, such as cracks from folds, and even irregular rents, afterwards mended, are not unfrequent in old pictures of this kind, executed on canvas. A small portrait in the Parliament Chamber, unimportant as a work of art, representing Lord Hardwicke as Chief Justice, 1733, exhibits the traces of such injuries in subsequent repairs. The temporary removal of portraits, in large establishments, for the purpose of cleaning or repainting the walls, is a probable cause of accidents (not to speak of the unsound state in which pictures are sometimes presented as gifts). On such occasions the portraits are often incautiously piled together, so that frames come in contact with canvases; the results are bruises and rents. Such accidents are likely to be more serious if the pictures have not been lined.

BARBER SURGEONS' HALL.

The celebrated Holbein is painted on wood, consisting of several pieces joined vertically. Some joinings are quite visible, but none have separated widely. It is unfortunate that the heads in this picture are more injured than many of the accessories. Portions of the King's dress, the diapered background, and other ornaments, the carpet and matting on the floor, are all better preserved than the portraits, and show that the picture was originally executed in the most careful manner of the master. The heads are all more or less injured, and some are so much repainted as to present scarcely a vestige of the original work. The head of the King is among those that have suffered in this respect. The heads of Chambers and Dr. Butts on the left, and those of Aylef and Monforte on the right, are now, perhaps, the best, as having been less over-painted; but they are rubbed, and have lost their modelling; the character and individuality that depend on truth of form are, however, still striking in many instances. The upper row of heads on the right side has either been entirely repainted, or was originally by an inferior hand.

This picture does not exhibit the embrowned appearance caused by London smoke; its injuries are far more irreparable. Its decay may probably be attributed to cleaning, as the well preserved state of most of the accessories shows that the picture was in itself calculated to resist the effects of time. The cleaning of portraits is always carried furthest in the heads; the desire to give an apparent vivacity to the most interesting parts is the cause of those parts being first destroyed.

I could obtain but scanty information respecting the history of former cleanings and restorations. A royal mandate, dated 1617, from James I., authorised the temporary removal of the picture to be copied, and it was probably then also cleaned. Its subsequent treatment seems to be unknown, except that from 1752 it had not been touched till one of the Company undertook to varnish all the pictures in the Court-room. The result is said to have been unsuccessful, and the varnish was removed in 1844. On that occasion the pictures were, for the first time, inclined forwards, having been previously flat against the walls. In a small room, having a domestic character, like that now referred to, this inclined position of the pictures would not be observed; but the conditions of architectural regularity, in large halls, require that the painted decorations should be upright, and, in general, close to the walls. Such an arrangement is, however, unfavourable to the due display and, in some degree, to the preservation of pictures; inasmuch as a picture (assumed to be above the eye) is better seen when inclined forwards, while its surface is then less liable to collect dust. The exceptions, as in the case of frescoes, need not be here considered.

Of the other pictures in the Court-room, some exhibit the effects of dark grounds, such as the portraits of a Spanish lady and gentleman. Others, more solidly executed, are in a much lighter state: a head of Inigo Jones, copied from Vandyck, has an almost modern freshness, apparently the result of recent cleaning.

GRESHAM COLLEGE.

Portrait of Sir Thomas Gresham, ascribed to Holbein, presented in 1845. The picture, painted on wood, is said to have been in an unsound state previous to that time. It was well repaired and restored by Mr. Peel, of Golden-square. The hands are rubbed, but not much repainted; the face, through which a crack passed, has been necessarily more extensively repaired. It must be obvious that the present state of a work so recently restored can be no criterion of the effects of a London atmosphere.

MERCHANT TAILORS' HALL.

The older pictures, such as portraits of Charles II., James II., and William and Mary, exhibit that monotony and opacity in the darker parts, which is one of the worst results of time on pictures executed on a dark ground, or with colours having

a tendency to lose their transparency and to blacken. Of some whole lengths on the walls of the staircase, some are now reduced to a very sombre state.

In the Court-room are some old portraits on wood. They are of little interest as works of art, but, though mostly the worse for age, they present a faded rather than a blackened appearance. A more modern picture, representing Henry VII. presenting the Charter to the Company, the figures being small in size, was painted and presented by Nathaniel Clarkson in 1778. Its present dingy appearance may be partly attributed to its situation over a fireplace.

The advantage of a solid execution in resisting the effects of time, and possibly of cleaning, is instanced in a portrait of George North, said to be by Hudson. A portrait of more modern date, by Opie, has suffered; though solidly prepared, the last thin paintings have disappeared, leaving the picture in an inharmonious state.

There are some fine modern portraits in this building; among others, a portrait of the Duke of Wellington, by Wilkie. The good practice of keeping pictures well strained appears to have been, in this instance, carried to excess, probably by the painter himself; the canvas on one side having started from the nails that secured it to the stretching-frame.

On inquiry I found that all the pictures in the building had been cleaned in 1851.

#### DRAPERS' HALL.

On the staircase is a very large equestrian portrait of the Duke of Marlborough, with allegorical figures, by Sir James Thornhill; an indifferent picture, but in good state, exhibiting no effects of London smoke nor other evidence of neglect. The portraits preserved in the various rooms are all in a remarkably good state; among them are those of Sir William Clayton and Sir Joseph Sheldon, pictures of merit, by Kneller and Gerard Voest. I was informed that the pictures belonging to this establishment are dusted and wiped about once in two months: if any of them have suffered in former times, they appear, at all events, to be now carefully attended to.

In the Long Gallery, a *Holy Family*, ascribed to Bellini, has been extensively repainted.

In the Court-room is a picture representing a lady and a boy. It is said to have been copied and cleaned when Bartolozzi engraved it, under the title of *Mary Queen of Scots and her Son*, by Zuccheri. The correctness of that designation has been questioned. The picture is a work of merit, and, though not uninjured by time, exhibits at present none of the ordinary consequences of London smoke.

#### CHRIST'S HOSPITAL.

The portrait of Edward VI. by Holbein, which I was requested to examine, had been sent, with one or two others, to Manchester.

I was told that the pictures in the Great Hall had been cleaned a few years since. The large portrait of Charles II., by Lely, has suffered from time; various parts, including the sky, having evidently darkened considerably. On examining that picture near (from the Gallery), I found that the canvas had been in parts torn and repaired.

The picture by Verrio, eighty feet long, has suffered in the usual way in the darks. The same may be said of the large picture on canvas, formerly ascribed to Holbein, in the Gallery, representing Edward VI. granting the Charter to the Governors. In the heads of the scholars, which, from the place they occupy in the work, can be best seen, this picture exhibits the coarse hand of Verrio.

#### MERCERS' HALL.

*General Court Room.*—A good portrait of Sir Thomas Gresham on wood. A vertical joining has slightly separated a little to the right of the centre. The picture, I was told, had been cleaned a few years since. From a statement in Brayley's *Middlesex*, it appears to have also been cleaned before 1814. The portraits preserved here having, it seems, been cleaned from time to time, exhibit no marked effects of London smoke. The sombre ap-

pearance of some darker specimens is to be traced rather to technical causes.

#### SKINNERS' HALL.

The old portrait of Sir Andrew Judde is not an example of the bad results of a city atmosphere. Though not remarkable as a work of art, and not uninjured by time, its colour is not embrowned. The portrait, on the staircase, of Sir Thomas Pilkington, painted by Linton, 1691, has become indistinct and monotonous in the obscurer parts. It was cleaned in 1840.

The hall, properly so called, of the Company, contains no pictures, but is a satisfactory instance of the preservation, in the heart of London, of ordinary painting and decorations in consequence of the room being duly warmed. I was informed that it had been entirely refitted in 1846; as yet the walls exhibit no discoloration. The apartment is warmed by small pipes, for hot water, of wrought iron. The use of wrought iron, as well as the employment of several small pipes together, instead of one large pipe, is said to be attended with good results. The fresh appearance of the room warrants the conclusion, often theoretically inferred, that a dry atmosphere tends to prevent the deposit of dust even under otherwise unfavourable circumstances, while dampness promotes it.

#### GUILDHALL.

*Council Chamber.*—The large picture of the *Relief of Gibraltar*, by Copley, has been recently cleaned. It is stated to have been previously in a very dark, discoloured state.

Opie's *Murder of Rizzio*, I understand, was cleaned a few years since: the darks of the picture appear to have increased, in this instance, probably from the use of certain colours.

Northcote's *Wat Tyler* is much obscured throughout, and has not the comparative freshness of Opie's picture in the lights. It was probably not cleaned at the same time.

The portrait of Nelson, by Beechey, and that of Marquis Cornwallis, by Copley, are both obscured by the ordinary effects of London smoke. Various other portraits, some recent, are beginning to exhibit the same results.

*Reading Room.*—This room contains several whole-length portraits, chiefly of the last century. They are all much embrowned, and do not appear to have been recently cleaned.

#### WEAVERS' COMPANY.

This Company now meets at the City of London Tavern. A few pictures are preserved in the room appropriated to the Society; and some, whole lengths, belonging to them, are in the great hall. The larger pictures, though lately put in order and varnished, are still dark. Among the smaller pictures is a portrait on panel of Queen Elizabeth, not important as a work of art, and somewhat coarsely executed, but probably taken from a good likeness of the period. Having apparently been cleaned at no distant time, its hue is pale, and shows no results of a smoky atmosphere.

#### CLOCKMAKERS' COMPANY.

Among the few pictures preserved in the room appropriated to this Society in the City of London Tavern, some have the extremely brown tint which indicates the uninterrupted effects of London smoke.

#### CHARTER HOUSE.

*Governor's Room.*—The oval portrait of Thomas Sutton, the founded, 1611, though faded, exhibits no discoloration from smoke; it has, perhaps, at a former period, been cleaned. The whole length portraits of Charles II., Villiers Duke of Buckingham, the Duke of Monmouth, and others, less interesting as works of art than as likenesses, all show, in greater or less degrees, the usual discoloration and the effect of dark grounds. In the 'Old Governor's Room' there is a handsome painted and gilt chimney-piece, which, though cleaned in 1838, has already re-acquired a brown tint in the upper part.

#### BRIDEWELL.

*Great Hall.*—In the large equestrian portrait of Sir William Withers, by Richardson and Wootton,

the foreground has become dark; the architecture is in the same condition; the sky has also, it may be inferred, lost its brightness. The causes of this deterioration are, no doubt, partly to be sought in technical conditions.

The picture, on canvas, representing *Edward VI. presenting the Charter*, attributed to Holbein, has not that truth of character and delicacy of execution which belong to the master; if originally by him, it must have been extensively re-painted; the darker parts are heavy; the lighter portions have the appearance of having been cleaned of late years.

The portraits of Charles II. and James II., by Lely, are in a darkened state. Various other portraits are preserved in the hall and in other rooms, some of modern date; but there are no remarkable examples of the embrowned state induced by long exposure to ordinary dust and smoke.

#### PICTURES AT THE ROYAL ACADEMY.

Certain pictures, between sixty and seventy in number, by deceased members of the Royal Academy, having been selected for exhibition at Manchester, in compliance with the wishes of the Executive Committee appointed to superintend that exhibition, the Council of the Academy have found it necessary to have those specimens first carefully cleaned.

The effects of mere London smoke, unaccompanied, it appears, by the consequences of damp, are well exemplified in the discoloration of most of the pictures referred to. A few of them have been cleaned before, but, with the exception of occasional dusting, the greater part are, it is believed, now subjected to that operation for the first time. A specimen by Wheatly, who died in 1801, was shown in a half-cleaned state to the Commission, and it is therefore unnecessary for me to describe it. I observe only that the brown colour induced is opaque, and that therefore, although a small amount of it might give tone to very light portions of a picture, the smallest amount would tend to lessen the transparency of shadows. That, in the instances referred to, the film is an accidental deposit only, quite independent of glazing, is proved by its being easily removable by moisture. This degree of change exemplifies what might take place in London, supposing pictures not to be attended to, in less than seventy years; Wheatly's picture was placed in Somerset House in 1791, when he was elected an Academician. The removal of the Royal Academy to Trafalgar-square took place in the beginning of 1837.

With reference to the question whether the accumulation of London smoke is injurious to the substance of a picture, I observe that in this specimen, now cleaned, the sharpest touches are unimpaired, and that the colours do not appear to have undergone any change. C. L. EASTLAKE.  
February 25, 1857.

*Report by Mr. Henry Farrer on the state of Pictures in some of the Metropolitan Collections.*

106, New Bond Street, London,  
February 25, 1857.

To the Secretary of the Royal Commission for Determining the Site of the New National Gallery.

Sir,—According to the instructions contained in your letter, dated February 5, 1857, authorizing me "to make an examination of the pictures in the following collections:—The Charter House; Barber-Surgeons' Hall, paying especial attention to the Holbeins, Gresham College; Christ's Hospital, comparing especially the pictures in the Great Hall with those in the Court Room; Merchant Tailors' Hall; Bridewell Hospital; Guildhall; St. Bartholomew's Hospital; The Temple;" as also "any other pictures in the metropolis, the state of which appears to you calculated to throw light upon the special inquiry now entrusted to you, and to draw up the result of your investigation in a written report," I beg to inform you that I have visited the above Institutions, and scrupulously examined some hundreds of pictures, and have also carried the inspection further, by visits to the following places—viz., The Painter-



Stainers, Goldsmiths, and Armourers and Braziers' Halls, and Mr. Oppenheim's Collection.

#### Report.

##### GUILDHALL AND MERCHANT TAILORS' HALL.

Pictures chilled and dirty, but no injury from atmospheric causes.

##### HOLBEIN'S PICTURES.

As regards this great master's works, I can find only two original pictures by his hand in the City of London; the one being the picture of *Henry the Eighth Presenting the Charter to the Barber-Surgeons*, in their Hall in Monkwell-street.

The other, the portrait (half-length) of the same King, painted three years before his death, being dated 1544, in the Committee Room at St. Bartholomew's Hospital. The first of these two pictures is much injured by repaint, especially on the heads, which are cracked; the forehead of the King is repainted. The head of Dr. Butts is the finest part of the picture, although that has been a little too closely cleaned.

I found here a letter, without date, in reference to the cleaning of the picture. It is thus written:—

"To the Masters, Wardens, and Court of Assistance of the 'Worshipful Company of Barbers.

"Gentlemen,—Understanding your intention of cleaning your capital picture of Henry the Eighth, by Hans Holbein, with others, we hereby offer our services, being informed by a friend of Painter-Stainers' Hall of your intention, embolden to solicit as above, being the persons who cleaned their capital pictures two years ago.

(Signed)

"J. FOISSEAU.

"JOHN TERRY.

"Little Queen-street, Lincoln's Inn Fields."

I have since learnt, through the kindness of Mr. Tomlins, Clerk of the Painters' Company, that Foisseau cleaned only two pictures (for which he was paid five guineas) for the Painters' Company in the year 1774, so that it is most probable that the cleaning took place about 1776, of the Holbein, at the Barbers, and as he was only entrusted with two pictures out of so large a collection, it does not bespeak much confidence in his abilities.

The second picture represents the King holding his stick, and habited in a superb dress.

This beautiful work (perhaps the finest portrait excepting only the one at Warwick Castle) is in the finest preservation, showing that the great difference in the appearance is not caused by atmospheric influence, but by neglect, want of ventilation, unskilful cleaners, improper varnishers, in short, want of that attention that every gallery regularly requires to keep pictures from becoming dirty.

These two pictures were painted for, and have been in the same locality, from the time they were finished. The one is perfect, the other much injured by man, and not by atmospheric effects.

Mr. Oppenheim's collection has been, for some twenty-five to thirty years, in a locality where, without attention, the pictures must have become very dirty. It consists of a gallery of modern and ancient pictures by foreign artists, and was for many years in Bow-lane, City, now in Cannon-street (New). This collection of Dutch Flemish art is in perfect condition, and contains some fine specimens in a well-lighted gallery.

##### GOLDSMITHS' HALL, ARMOURERS' HALL, PAINTER-STAINERS' HALL.

All the pictures in these Halls are more or less in a dirty condition (except the Armourers, which are perfect); but by judicious treatment by a person skilled in the art of cleaning, they might be restored to their original brilliancy. This also bears upon the other pictures in the Halls set down by the Royal Commission for inspection, with the exception of Christ's Hospital. In the large Hall they are much chilled and out of order; but this is easily accounted for when I state that I witnessed 700 boys, besides the lady attendants and others, who take their meals three times a day in this hall, as I am informed by the principal who attends on these occasions.

##### ST. BARTHOLOMEW'S HOSPITAL.

I find no difference here except in neglect of the pictures. If the pictures in the Hall were cleaned, they would look as well as those in the Committee Room, not being substantially injured.

The Hogarths are in a most woeful state. It is stated that the last time they were cleaned, it was done by the person who painted and glazed for the Hospital. Fortunately, I think this man's ignorance in dealing with pictures will be the cause of our great artist's works being restored to our view, as I feel assured he has sized the pictures previously to varnishing them, so that the chill and damp (for want of a stove to warm the hall and staircase) have destroyed the albumen, and, therefore, separated the varnish from the surface of the picture in patches of opacity.

##### BRIDEWELL HOSPITAL.

The pictures here are in a similar state of dirt, not having been touched for many years, although in no way injured.

##### GRESHAM COLLEGE.

In fair condition, very few pictures.

##### CHARTER HOUSE.

No injury done to the Collection.

##### TEMPLE AND INNER TEMPLE HALL.

The pictures are in a good state. I was informed by an attendant that they have not been wiped since 1853.

In conclusion, I beg to observe that the same damage would accrue, whether the pictures were placed in town or country, under similar neglect. Substantially I do not consider that the several pictures I have examined in the Halls, Committee Rooms, &c. &c. (as desired by the Royal Commissioners), have been injured in any way by atmospheric influence, but by neglect, want of ventilation, bad varnishes, bad cleaning, &c.

I may instance, in proof of my report, the state of the pictures at Hampton Court Palace, standing in a most salubrious spot for so many years. I know of no collection in a worse state; and certainly the injury is due, not to atmospheric effects, but to causes of bad cleaning and others already alluded to.

I have, in justice to the several persons having charge of the pictures in the Companies' Halls visited by me, to express my thanks for the attention and facilities afforded me for the fully carrying into effect the examination of the works of art contained therein, in accordance with the wishes expressed by the Royal Commission in your letter authorising me to carry out such examination. I have the honour to remain, sir, your obedient servant,

HENRY FARRER.

##### Report of Mr. J. M. Smith on the state of Pictures in some of the Metropolitan Collections.

137, New Bond-street, February 17, 1857.

Sir,—At the request of the Royal Commission, I have examined the pictures in the various collections enumerated by you, and hasten to inform you of my opinion of their condition.

Generally, the pictures appear to me in a very good state; and require little more than the dirt being removed and wiped or revarnished.

In Merchant Tailors' Hall, where there are about thirty pictures, some of them have been sadly neglected; but I could not observe any injury arising from excessive heat or damp, or from the effects of atmosphere. Many of them are exceedingly ancient, and it is surprising that, with so little attention, they have lasted so well. The same observations may apply to Bridewell Hospital, Barber-Surgeons' Hall, and the Temple. In the two halls of the latter the pictures scarcely require more than a wipe with a silk handkerchief.

I cannot report so favourably of the pictures at Christ's Hospital. The three large pictures in the grand hall seemed to have suffered more than any I had yet seen. Besides the misty effect arising from the varnish chilling, in many parts so perished is the varnish that the pictures, to the uninitiated, would appear seriously injured. This, however, is

not the case, and a skilful cleaner would easily restore the pictures (without painting on them) to a perfect state. I should attribute the apparent damage to the steam rising from the numbers daily dining in the hall, and not to any effect of the atmosphere. I am, sir, your obedient servant,

JOHN M. SMITH.

The Secretary to the National Gallery Site Commission.

##### Report by Mr. E. T. Parris on a Picture by Sir James Thornhill at Hampton Court.

39, Albion Street, Hyde Park.

February 20, 1857.

My Lord and Gentlemen.—Agreeably to the instructions received from the New National Gallery Site Commission, to examine the state of a painting by Sir James Thornhill, in the 'Queen's Bedroom,' in the Palace at Hampton Court, comparing its condition with that of other works by the same artist, which have been exposed to the atmosphere of the metropolis, I have the honour to lay before you my Report.

I have carefully examined the painted ceiling at Hampton Court, by Sir James Thornhill, and consider it in a very perfect state. It is executed partly in colours and part chiaro-scuro. It is done on a plaster ground (not on canvas), and begins on a cove rising from a projecting cornice to a flat ceiling. There is only one slight crack in the plaster. The painting itself seems as perfect and bright as if executed last year. It does not appear to have undergone the process of "cleaning," although it may have been washed and varnished. The execution of the painting appears to have been the same as that of similar works at Greenwich Hospital by the same artist, and all the colours have stood as well here as there. In comparing it with Thornhill's work in the dome of St. Paul's Cathedral, I find there is an essential difference in the materials used. The white is of the purest quality at Hampton Court, as well as the oil, or whatever vehicle it was, while at St. Paul's the white was common white lead, worked with drying or boiled oil as a vehicle. Now, I consider the different materials have produced very opposite results; for if the Hampton Court ceiling had been in the dome of St. Paul's, little of it would have remained, as the weakness of raw pure oil would not have resisted the corrosion which always occurs if moisture is added to the dirt accumulating on the surface, eating its way through to the plaster. This, coupled with the impossibility of continually dusting the dome, and with the effects of fogs on the Cathedral for 130 years, would destroy the painting, leaving a dirty white mouldy-looking surface under the soot. But as the dome was painted with a different oil, and one more fitted for resisting the effects of moisture, the painting has not been destroyed wherever the plaster remained sound; but then the drying oil becomes with age very dark and horny, making all colours mixed with it heavy and opaque. I believe if portions of Thornhill's work at Hampton Court, Greenwich, and St. Paul's, had been placed side by side in Trafalgar Square, under the same conditions, that is, never dusted, but kept perfectly dry, the two first would have retained all their colouring, and, when cleaned, would be as fresh as they now appear; but that portion from St. Paul's could never be brought back again, the oil having changed quite through, and become brown to the base, or plaster ground, besides the common white lead mixed with it becoming heavy and grey at the same time.

In submitting the foregoing remarks, it does not appear to me that the works of Sir James Thornhill afford fair opportunities of judging of the influence of the London atmosphere in comparison with that of Hampton Court.—I have the honour to be, my Lord and Gentlemen, your obedient and humble servant,

EDMUND THOMAS PARRIS.

To the Royal Commissioners for Determining the Site of a New National Gallery.

To CORRESPONDENTS.—J. F.; J. A. D.; L. C.; M.; M. B. A.—received.

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Trin. Coll., Dublin, July 1, 1857. W. H. H.

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